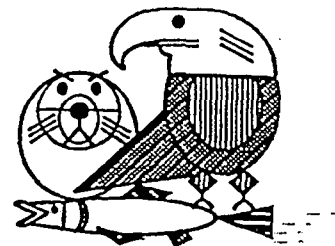


Exxon Valdez Oil Spill Trustee Council

Public Advisory Group

645 G Street, Suite 401, Anchorage, Alaska 99501-3451

Phone 907-278-8012 Fax 907-276-7178



MEMORANDUM

TO: PAG Members

FROM: Molly McCammon
Executive Director

DATE: May 30, 1996

RE: Briefing materials for June 5 meeting

RECEIVED
MAY 31 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

Enclosed are your briefing materials for the June 5 PAG meeting. A number of other items, including the administration (97100) budget and habitat status reports, will be distributed at the meeting. If you have any questions about these materials, please don't hesitate to call me in advance of the meeting at 278-8012.

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation

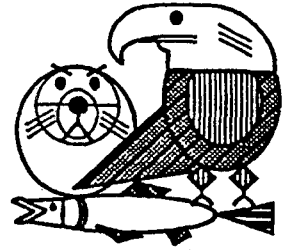
United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

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Phone 907-278-8012 Fax 907-276-7178



AGENDA

Exxon Valdez Oil Spill Trustee Council
Public Advisory Group
First floor conference room
645 G Street, Anchorage, Alaska

Wednesday, June 5, 1995
9:00 AM

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EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

DRAFT

DRAFT
5/30/96

PURPOSE:

1. Receive status reports on restoration program and habitat acquisition
2. Review Fiscal Year 1997 Detailed Project Descriptions received for consideration for funding by the Trustee Council

Wednesday

9:00 AM	Call to order/roll call/ approval of agenda	Vern McCorkle, Chair
9:05	Approval of summary of March 13, 1996 PAG meeting	Vern McCorkle, Chair
9:10	Comments from the Trustee Council (tentative)	
9:20	Executive Director's Report ● Status report on recent activities ● Habitat Protection ● Administrative issues ● PAG field trip	Molly McCammon, Executive Director

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation

United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

Continued

10:00	Community Involvement Coordinator's Report	Martha Vlasoff
10:15	Seabird Collection Request	Stan Senner, Science Coordinator
10:30	10th Anniversary Planning	Molly McCammon, Executive Director Stan Senner, Science Coordinator
10:45	Review of FY 97 Detailed Project Descriptions	Dr. Robert Spies, Chief Scientist Stan Senner, Science Coordinator
12:00 PM	Lunch	
1:00	Public Comment	
1:30	Continuation of FY 97 Detailed Project Description Review	
5:00	Adjourn	

APPLIED
marine
SCIENCES

TO: Molly McCammon
Executive Director

FR: Robert Spies *RS*
Chief Scientist

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MAY 9 1996

14.2.21 L
April 29, 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

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MAY 3 1996

RE: Proposed Collection of Bird Specimens for Project 96163N-Effects of Diet
Quality on Postnatal Growth of Seabirds: A Controlled Experiment
EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
NATIVE RECORD

Marc Romano and John Piatt, both of the National Biological Service, have requested permission to collect one chick from each of 20 tufted puffin and 20 black-legged kittiwake nests in the Barren Islands during the FY 1996 field season. Their work is part of the Alaska Predator Ecosystem Experiment (APEX) Project, which is addressing the question of whether declines or changes in the availability of forage fish have contributed to the lack of recovery of marine birds in the oil-spill area. Most of the objectives of the APEX project are being addressed through surveys and observations in the field, linking the presence and availability of forage fish to the foraging and reproductive success of marine birds. It is important to the success of the APEX, however, that these efforts in the field are complemented with laboratory experiments that test, under controlled conditions, the effects of diet on the growth of seabird chicks. This is what Romano and Piatt propose to do.

I have attached their justification for the proposed collections. They have carefully addressed the questions in the draft Trustee Council policy on collections dated March 30, 1995, and I will not repeat their answers here. The effects of taking 20 chicks each from the tufted puffin and black-legged kittiwake population in the Barren Islands will be negligible, especially given the many chicks of this age (5-7 days post hatching) do not survive to maturity. Further, neither species is considered to have been injured by the oil spill, and there is no concern about the conservation status of either species in the northern Gulf of Alaska. Finally, I note that a federal collecting permit has been secured.

In summary, I recommend approval of the request from Romano and Piatt. Please let me know if you have additional questions.

enclosure (1)

cc: Marc Romano & John Piatt, NBS
Lisa Thomas, NBS
Stan Senner, Restoration Office
Dave Duffy, APEX Project Leader



FY96 PROPOSED COLLECTION OF TUFTED PUFFINS AND BLACK-LEGGED KITTIWAKES FROM THE BARREN ISLANDS IN LOWER COOK INLET, ALASKA, AS PART OF PROJECT 96163N

What will be learned from the collections?

The proposed research addresses the physiological changes in nestling tufted puffins and black-legged kittiwakes in response to diet quality. It is known that energy density and lipid content within prey species of forage fish influence nestling seabird growth. To isolate the role that various dietary components (i.e. lipid levels and energy content) play in the growth and development of nestling seabirds, a laboratory situation for rearing captive birds will be used. Factors influencing growth and development of young birds such as extremes in weather and inconsistency of food delivery can be controlled. Lab studies will allow the effects of the dietary components to be observed without confounding factors.

A measure of fat reserves at time of fledging relates directly to the survivability of young birds. Fat reserves may be especially important for high latitude seabird chicks that need to withstand extreme water temperatures while developing their prey foraging strategies. Studies to estimate the body condition of nestling seabirds have relied primarily on morphological characteristics that are easily measurable (weight, wing length, tarsus length, culmen length). However, no condition indices have been created specifically for fledglings of these species. For accurate determination of fat reserves we will need to sacrifice birds and perform a laboratory analysis. Not only will this allow us to answer our specific research question but it will also create a condition index for future researchers to employ.

Effects on population levels

Chicks to be used in this study will be removed from their nests at 5-7 days post hatch, and transported to the Kasitsna Bay Fisheries Lab for the controlled feeding experiment. These birds will be obtained from the Barren Islands Group, which is part of the Alaska Maritime National Wildlife Refuge. Twenty birds of each species will be required. Tufted puffin population estimates for the Barren Islands are approximately 102,000 birds, while black-legged kittiwakes are estimated at 53,200 birds. Our take of puffins would represent 0.02% of the population and that of kittiwakes would represent 0.04% of the population.

No adult birds will be removed from the population for this research. The use of nestlings reduces the impact of removing birds from the population considerably. During the nestling phase seabirds face the highest mortality rate of their life history. Predators, environmental conditions, and food shortages combine to take a large percentage of chicks. Many of the chicks

taken for the captive feeding trials would not survive to fledge under natural conditions. Of the birds that fledge successfully from a colony site, many will not survive to return to the colony to breed as an adult. Thus the long-term effects of our take on the breeding population of birds is much less than if we were taking breeding adults.

Currently, population trend data for puffins and black-legged kittiwakes on the Barren Islands is unavailable. Alaska Maritime National Wildlife Refuge biologists report no observable change in either population in recent years. This is true despite a total breeding failure at the kittiwake colony site on East Amatuli Island in 1993. Such an event is a common occurrence at kittiwake colonies throughout Alaska. The information collected as a part of this study will give researchers and managers valuable insight into the periodic failure of kittiwake colonies. Failures have been linked to a decrease in food supply; chicks hatch successfully yet die of starvation within the first few weeks. To understand this process the importance of certain food items within the diets of kittiwakes and puffins be determined. This information will assist managers in assessing the impacts of changing forage fish abundance and availability on seabird productivity.

Collection methods and possible alternatives

Black-legged kittiwake and tufted puffin chicks will be removed from their nests at five to seven days post hatch and transported to a captive rearing facility (Kasitsna Bay Fisheries Research Station, Kachemak Bay, Alaska). Kittiwakes will be removed in late June and early July and puffins will be removed in late July. Kittiwakes will be fed for approximately thirty days then sacrificed. Puffins will be fed for approximately forty-five days before they are sacrificed. These time periods reflect approximate fledging rates for both species. The birds will be euthanized using diethyl ether which is an accepted and widely used method.

To measure body composition variation, relative to diet quality, we will determine fat and protein content of experimentally reared individuals. An alternative to sacrificing birds to gain this information would be the application of a condition index that includes morphological and total body electrical conductivity (TOBEC) data. Unfortunately no indices have been derived for fledglings of the species we have proposed to collect. To create a condition index it is necessary to sacrifice at least twenty birds of each species. Thus deriving a condition index would not reduce the number of collected birds. However, we intend to use data from this study to create a condition index that can be used as a non-lethal estimate of condition in the future.

What will be lost by not taking the birds?

The question we are trying to answer requires exact knowledge of body condition (i.e. protein and fat contents). It is not possible to obtain this

information without sacrificing birds. In previous work conducted on red-legged kittiwakes, chicks given two different diet treatments did not differ greatly in morphological characteristics. However, when analyzed in the laboratory it was found that their fat levels differed significantly. The differences would have a significant effect on their survivability. Research establishing these parameters will help to explain future seabird breeding failures observed within Prince William Sound and Lower Cook Inlet.

What can we hope to learn from this study to justify collection?

Currently, seabird/forage fish interactions are a topic of great concern in Prince William Sound and throughout the area affected by the *Exxon Valdez* oil spill. It is believed that distribution and abundance of certain fishes limit piscivorous bird and mammal populations. The consequences of prey availability on predatory species cannot be fully understood without knowledge of the physiological effects of various dietary components. The detailed tissue analysis resulting from this research will help identify the key components of growth and development within nestling seabird diets. Without a detailed tissue analysis of sacrificed birds it will be virtually impossible to accomplish this.

Federal and state permits

Federal and state permits to conduct collection of birds for research purposes have been secured through the US Fish and Wildlife Service, Office of Law Enforcement (permit # PRT-789758).

**PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION
FY 97 WORK PLAN
(revised 5/30/96)**

TOTAL EXECUTIVE DIRECTOR'S RECOMMENDATION:	\$14,774.0	<i>New \$1,039.1 Cont \$13,734.9</i>
TOTAL DEFER:	\$895.9	<i>New \$300.4 Cont \$595.5</i>
TOTAL NO REC. YET:	\$680.2	<i>New \$484.7 Cont \$195.5</i>
TOTAL LOWER PRIORITY:	\$180.0	<i>New \$180.0 Cont \$0</i>
	\$16,530.1	<i>New \$2,004.2 Cont \$14,525.9</i>

DEFER CONSISTS OF:

97007A Arch. monitoring	\$43.5 (new part)	
97012 Killer whales	\$157.5	
97025 NVP	\$204.1 (partial)	
97165 Herring genetics	\$103.9	
97220 PWS wildstock	\$26.0 (new part)	
97222 Anderson Creek	\$78.8	
97239 Sockeye carcasses	\$127.5 (new)	
97247 Kametolook R.	\$18.9 (new)	
97256A Columbia Lake	\$34.4	
97256B Solf Lake	\$16.8	
97267 Pt. Graham skiff dock	\$62.5 (new)	
97268 Educ. harvest trips	\$22.0 (new)	
	\$895.9	

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TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

NO REC. YET CONSISTS OF:

97001 Harbor seals	\$195.5	
97093 Pinks	\$484.7 (new)	
	\$680.2	

LOWER PRIORITY CONSISTS OF:

97231 Marble mur'let	\$180.0 (new)	
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NOTE:

Amount expected was \$13,797.5
 Total request was \$33,330.6
 Of this, \$16,729.7 continuing (49 projects)
 and \$16,600.9 new (71 projects)

This summary sheet does not include 1-time projects that will be funded outside of the \$16 million cap.

edrec

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Pink Salmon					\$1,887.5	\$3,495.4	\$1,860.6	\$809.5	\$238.4	\$2,940.5
97076	Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon	A. Wertheimer/NOAA	NOAA	Cont'd 3rd yr. 4 yr. project	\$619.0	\$623.2	\$618.8	\$234.6	\$0.0	\$853.4

Abstract

This project examines the effects of oil exposure during embryonic development on the straying, marine survival, and gamete viability of pink salmon. The objectives are to conduct a related series of controlled experiments on straying of pink salmon to determine the role of oil and other factors so that field studies of straying in PWS after the spill can be interpreted; to determine if the return rate of pink salmon to adult is reduced when they have been exposed to oiled gravel during embryonic development; and to continue investigations into whether such exposure causes heritable damage to reproductive fitness of pink salmon.

Chief Scientist's Draft Recommendation

The greatest value of this project is that it supports an understanding of the effects of oil on nominal straying rates, reproduction, and early developmental stages of pink salmon. The weakness is identified by the reviewers still exist, i.e. the difficulty of projecting results obtained in SE Alaska, and the lack of a genetic component. If straying rates are in fact lower than projected, an even more expensive field effort will be needed to complete this project.

Executive Director's Draft Recommendation

Fund contingent on approval of a reduced budget. Although the scientific reviewers have raised questions about this project, NOAA has been responsive to prior concerns and this work should be funded in FY 97 to get the most return out of what has been a significant investment of Trustee Council dollars. This project will provide useful information on marine survival of pink salmon that will have broad application to salmon management.

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EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97093	Restoration of Prince William Sound Pink Salmon by Diversion of Harvest Effort	T. Linley/Prince William Sound Aquaculture Corporation	ADFG	New 1st yr. 5 yr. project		\$484.7	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Pink salmon egg mortality attributed to oiling of anadromous streams from the <i>Exxon Valdez</i> oil spill has contributed to a reduction in adult pink salmon returns. Natural populations of pink salmon are harvested with large numbers of hatchery pink salmon in mixed stock fisheries, which may limit escapement to damaged streams and thereby delay recovery. This project will be directed at changes in hatchery production to reduce exploitation of injured wild stocks. The project will focus on changing the location and timing of hatchery returns in western Prince William Sound.			<u>Chief Scientist's Draft Recommendation</u> It is not clear that this proposal would result in less exploitation of wild pink salmon stocks in western PWS, though it may have potential to do so if the run timing of the chums is selected to coincide with timing of wild pink stocks. Until a policy decision is made on whether altered run timing and remote releases should be pursued, this proposal is premature. Application of traditional harvest management strategies would probably be a more direct way to address problems with wild stocks in western PWS. This proposal, however, does have the potential to help restore commercial fishing services. The proposing organization is well qualified to do this type of work, but there is confusion about the relationship with project 97284. Given the current market value of pink and chum salmon and the large cost of this program, the Trustee Council may also wish to consider whether an investment in this project is worthwhile. Do not fund.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding pending further review of whether this supplementation project would compromise the ability of the NVP (/025), APEX (/163), and SEA (/320) projects to test their ecosystem-scale hypotheses and of possible effects on other injured resources, such as Pacific herring and harbor seals in the Montague Island area. Establishing a new salmon run at Naked Island is probably not appropriate with respect to ADF&G supplementation and genetics policies. In addition, more information is needed on whether this project would result in reduced pressure on wild pink salmon stocks that were injured by the oil spill, but appear to be recovering. Any Trustee Council support of this project would require compliance with the National Environmental Policy Act (NEPA), which could delay implementation until FY 98.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97139A1	Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass Improvement	S. Honnold/ADFG	ADFG	Cont'd 3rd yr. 5 yr. project	\$35.0	\$26.4	\$26.4		\$0.0	\$26.4
<u>Abstract</u> This proposal will evaluate the barrier bypass improvement at Little Waterfall Creek, as indicated by pink and coho salmon use of the bypass. The renovation of the bypass (decreased grades and addition of resting pools) was completed in FY 96 and is expected to facilitate increased spawning habitat use by pink and coho salmon. Studies in FY 97 will include bypass inspections to document salmon passage, spawner enumeration, and juvenile salmon abundance monitoring.			<u>Chief Scientist's Draft Recommendation</u> This project will evaluate the effects of improvements to Little Waterfall Creek bypass, and it seems appropriate to determine the performance of the improvements. However, there is concern about the lack of attention to interspecific competition and interactions with other species. FY98 funding is contingent on addressing these questions; funding in FY99 is not recommended. Fund as requested in 97.			<u>Executive Director's Draft Recommendation</u> Fund FY 97 only, contingent on receipt of report on Project 95139A1. Project is intended to increase available spawning habitat and thus provide additional pink and coho salmon for harvest as a replacement for salmon lost in the oil spill. FY 97 work will be monitoring and evaluation of the barrier bypass modification, as required by the Trustee Council's supplementation criteria. Funding for further monitoring in FY 98 will be considered only if questions raised by the Chief Scientist concerning interspecific competition and interaction with other species are addressed.				
97139A2	Port Dick Creek Tributary and Development Project	N. Dudiak/ADFG	ADFG	Cont'd 2nd yr. 5 yr. project	\$37.0	\$82.7	\$68.7	\$49.7	\$39.7	\$190.1
<u>Abstract</u> The goal of this project is the restoration of the native Port Dick Creek salmon stocks. Actual restoration of the spawning habitat will take place in June 1996. If natural colonization rates are not adequate to fully seed the restored habitat, on-site fish culture techniques will be incorporated using the native pink and chum salmon stocks to maintain genetic integrity. Water temperature, water level, salinity and stream velocity will be monitored. Additional post construction substrate monitoring is proposed.			<u>Chief Scientist's Draft Recommendation</u> This is a continuing project in which it is important to evaluate the effects of improvements on Port Dick Creek. The increased funding to monitor bedload transport and salmon survival is appropriate given past peer review comments. Fund, including additional monitoring.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of reduced budget. Funding includes new objectives related to bedload transport monitoring and increased salmon fry evaluation. This project is intended to increase available spawning habitat and thus provide additional pink and chum salmon for harvest as a replacement for salmon lost in the oil spill				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97139C1-CLO	Montague Riparian Rehabilitation Monitoring	D. Schmid/USFS	USFS	Cont'd 4th yr. 4 yr. project	\$0.0	\$9.3	\$9.3	\$0.0	\$0.0	\$9.3
<u>Abstract</u> The proposal for 1997 is a close-out of project 96139C1. Originally, 1996 was to be the close-out year, but some instream structures failed. In 1996, the structures which failed will be repaired using better anchoring techniques. Crowded stands of Sitka spruce, which were thinned to accelerate growth, will also be monitored. In 1997 we propose to monitor the repaired structures to make sure they have withstood the high flows associated with the spring runoff, collect the final data on spruce growth, and write the final report.			<u>Chief Scientist's Draft Recommendation</u> Final year of this project. Fund.			<u>Executive Director's Draft Recommendation</u> Fund. This project is designed to evaluate the results of a previous Trustee Council effort to improve habitat for pink salmon and chum salmon on Montague Island. FY 96 was to be the final year of funding for the project (monitoring and report writing). However, some of the instream structures failed and the FY 96 funds were reprogrammed to repair the structures. FY 97 funding would allow the desired monitoring to occur.				
97186	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound	T. Joyce/ADFG	ADFG	Cont'd 9th yr. 11 yr. project	\$260.5	\$275.1	\$265.6	\$260.5	\$85.0	\$611.1
<u>Abstract</u> There is a growing body of evidence indicating that the Exxon Valdez oil spill has been at least partially responsible for weak pink salmon returns to the Sound. Pink salmon runs are dominated by hatchery populations, and efforts to restore injured wild populations through selective harvesting of hatchery fish depend upon the availability of data pertaining to the spatial and temporal abundance of wild fish in the different fishing areas of PWS. This project will provide accurate, real-time and post-season estimates of hatchery and wild contributions to commercial harvests by date and fishing district and also to hatchery cost-recovery harvests. This information is important for fisheries managers who must anticipate the effects of fishing strategies on injured populations.			<u>Chief Scientist's Draft Recommendation</u> Highly valuable on-going project. Technically excellent. Fund at originally projected level.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of reduced budget. Trustee Council funding will be provided again in FY 98 to ensure two years of overlap with the Otolith Thermal Mass Marking Project (/188). Only close-out funds will be provided in FY 99. The project provides information that allows fisheries managers to vary the timing and location of commercial harvest to protect injured wild stocks.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon In Prince William Sound	T. Joyce/ADFG	ADFG	Cont'd 3rd yr. 5 yr. project	\$100.5	\$122.4	\$100.5	\$100.5	\$55.0	\$256.0
<u>Abstract</u> This project will develop otolith marking as a stock separation tool. All hatchery-produced salmon will be marked using this technique. Recoveries of these marks from returning adults caught in mixed-stock fisheries in PWS will allow improved estimation of the hatchery-wild composition of the catch. Improved estimation will enhance the fishery manager's ability to protect damaged wild pink salmon stocks in mixed-stock fisheries. The project will be conducted over two pink salmon life cycles. Experience with two life cycles is needed to fully develop a program that integrates induced banding code quality, otolith processing rates and costs, and statistical designs for catch sampling.			<u>Chief Scientist's Draft Recommendation</u> This is an excellent ongoing project. Costs for FY97 have increased over those of last year; additional justification is needed. The capture of juvenile salmon in southwest Prince William Sound is appropriate, but should be done by the SEA program. Fund at level originally projected for FY97.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of revised Detailed Project Description and budget that eliminate Objective #6 (sampling juvenile salmon in southwest Prince William Sound). Trustee Council funding will be provided again in FY 98 to ensure two years of overlap with the Coded Wire Tag Project (/186). Only close-out funds will be provided in FY 99. The project provides information that allows fisheries managers to vary the timing and location of commercial harvest to protect injured wild stocks. Otolith marking is a more accurate and less expensive technology for providing the information now obtained through coded wire tags.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom- mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97190	Construction of a Linkage Map for the Pink Salmon Genome	F. Allendorf/Univ. Montana	ADFG	Cont'd 2nd yr. 5 yr. project	\$250.0	\$267.5	\$254.5			\$254.5
<u>Abstract</u> This project will construct a detailed genetic linkage map for pink salmon by analyzing the genetic transmission of several hundred DNA polymorphisms. The ability to genetically map the location of oil-induced lesions will allow the thorough identification, description, and understanding of oil-induced genetic damage. This research will also aid other recovery efforts with pink salmon, including estimation of straying rates, description of stock structure, and testing whether marine survival has a genetic basis.			<u>Chief Scientist's Draft Recommendation</u> The project proposes sound technical approaches. However, there is inadequate description of the experimental design for application of the developed genetic markers to management questions. Long-term applications of the developed genetic markers could be very valuable, although specific link to restoration objectives is not well established in proposal. The investigators are qualified and talented, but new to this line of work, and it will take time for them to get the new techniques implemented. Continue funding in FY 97, but [reduced budget?]. No commitments should be made at present to funding beyond FY 97. Concrete evidence of cost sharing by non-EVOS sources is essential for future commitment of EVOS funds. Fund one more year and then review again.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of reduced budget. This project will provide fundamental information which will likely aid restoration of wild stocks of pink salmon and benefit pink salmon management in the future. It is a long-term project with national importance. Trustee Council commitment is to provide funding through FY 97 only.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97191A	Field Examination of Oil-Related Embryo Mortalities that Persist in Pink Salmon Populations in PWS	M. Willette/ADFG	ADFG	Cont'd 9th yr. 11 yr. project	\$407.0	\$283.4	\$200.0	\$164.2	\$58.7	\$422.9
<u>Abstract</u> Elevated embryo mortalities were detected in populations of pink salmon inhabiting oiled streams following the <i>Exxon Valdez</i> oil spill. These increased rates of mortality persisted annually through the 1993 field season, suggesting that genetic damage may have occurred as a result of exposure to oil during early developmental life-stages. The consequences of this putative genetic damage include physiological dysfunction of individuals and reduced reproductive capacity of populations. The 1994 field results show no statistical difference in embryo mortality between oil-contaminated and reference streams. This project would continue to monitor the recovery of pink salmon embryos in the field and would verify and identify the occurrence of genetic damages.		<u>Chief Scientist's Draft Recommendation</u> The recovery of pink salmon streams is planned to be followed through two even-year and two odd-year life cycles, and thus objectives A and B of this proposal should go forward. However, the genetic objectives (C and D) were to be closed out in FY96, and there is no compelling evidence to change this plan. The project should be funded at a reduced level that reflects elimination of objectives C and D			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of revised Detailed Project Description and budget that eliminate genetic portion of project (Objectives C and D) for which close out funds were provided in FY 96. Continue the stream sampling and embryo mortality component, which represents the major monitoring project for the ongoing injury to and recovery of pink salmon.					
97194	Pink Salmon Spawning Habitat Recovery	M. Murphy and S. Rice/NOAA	NOAA	New 1st yr. 2 yr. project		\$138.3	\$138.3		\$0.0	\$138.3
<u>Abstract</u> This project would examine the level of oil contamination in pink salmon streams in 1989-90 and 1995 by analyzing sediment samples collected in 1989-90 by ADFG and similar samples collected in 1995 by the Auke Bay Laboratory/NOAA. Analysis and comparison of the 1989-90 and 1995 data would complete the understanding of the injury to pink salmon by documenting the initial exposure level and subsequent habitat recovery.		<u>Chief Scientist's Draft Recommendation</u> This is a good proposal and it may provide the final results that clarify the impact of the spill on early life stages of pink salmon. The proposal could have been stronger if there was a greater overlap between sediment samples and streams that were studied for embryo morality. However, comparison of the data from this project from similar data from laboratory experiments will allow greater understanding of whether field conditions in pink salmon streams in 1989 and 1990 were toxic to early life history stages of pink salmon. Fund.			<u>Executive Director's Draft Recommendation</u> Fund contingent on receipt of report on Project 95074. This project would tie actual concentrations of oil obtained from field samples in 1989, 1990, and 1995 in pink salmon streams to embryo mortalities and would illuminate the role of direct exposure in potentially causing the observed multi-year effects in pink salmon embryos. The level of funding recommended includes funds for preparation of the final report in FY 97.					

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97196	Genetic Structure of Prince William Sound Pink Salmon	J. Seeb/ADFG	ADFG	Cont'd 4th yr. 6 yr. project	\$178.5	\$236.0	\$178.5			\$178.5
<u>Abstract</u> Wild-stock pink salmon suffered direct lethal and sublethal injuries as a result of the <i>Exxon Valdez</i> oil spill. An understanding of the population structure of pink salmon in Prince William Sound is essential to assess the impact of these injuries on a population basis and to devise and implement management strategies for restoration. This project is designed to delineate the genetic structure of populations of wild pink salmon inhabiting the Sound.			<u>Chief Scientist's Draft Recommendation</u> This is a good continuing project that potentially will contribute much to the restoration of pink salmon stocks in PWS. However, there is a need to define what level of genetic variability is important for management of the stocks. There is need for more information on the methods for analysis for the mitochondrial DNA work and to identify which of the 70 polymorphic loci are most useful or promising to pursue. The investigators are technically well qualified but application of the information would benefit from closer integration with agency managers. This project must be more cost effective. Need justification for DNA plate reader. Fund at original FY 97 estimate.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of revised Detailed Project Description that addresses technical questions raised by Chief Scientist, and approval of revised budget at the level of funding originally projected for FY 97. Funding also contingent on receipt of reports on Project 95191A. This project is designed to determine geographic extent of genetic differences in Prince William Sound pink salmon. Knowledge of the location of pink salmon stocks and genetic differences among the stocks in Prince William Sound could help refine pink salmon management areas and goals.				
97209	Examination of Straying of Hatchery Pink Salmon into Wild Populations in Prince William Sound	T. Joyce/ADFG	ADFG	New 1st yr. 2 yr. project		\$123.9	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> There is a growing body of evidence indicating that the <i>Exxon Valdez</i> oil spill has been at least partially responsible for weak wild pink salmon returns to Prince William Sound. The most direct way to restore the wild pink salmon population is through intense fisheries management targeting hatchery fish while restricting the harvest of wild salmon. An understanding of the straying rate of hatchery fish into wild salmon systems is important for the development of fishery management plans and the evaluation of remote release programs for hatchery fish.			<u>Chief Scientist's Draft Recommendation</u> The objectives of this study can be met by examining fish returning to hatcheries for lesser cost. The critical issue in straying, whether there is gene flow between salmon populations in different streams, is not addressed by the nominal straying measurements proposed for this project. This project seems more related to normal agency management and aquacultural operations than to the restoration program, and some of its objectives will likely be achieved by 97076.			<u>Executive Director's Draft Recommendation</u> Do not fund. Project is intended to provide additional information to fisheries managers. However, the project is closer to normal agency management than to restoration. In addition, some of the objectives duplicate efforts currently being funded under Project /076.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97228	Quantitative Genetic Assessment of Embryo Mortality and Developmental Stability in Offspring of Oiled Pink Salmon	B. Smoker/UAF	NOAA	New 1st yr. 3 yr. project		\$96.7	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> A quantitative genetic analysis of embryonic mortality and other measures of developmental stability will be carried out. Estimates of genetic parameters for mortality (heritability, genetic correlation, non-additive and maternal sources of variation) will be important for management of pink salmon resources during restoration because they predict the rate at which genetic change can be expected to occur. This project is an augmentation of project /076 being carried out by NOAA.			<u>Chief Scientist's Draft Recommendation</u> Proposal should not be funded without further expansion of technical approach to discuss quantitative genetic methods and alternative approaches to measuring developmental instability. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund based on Chief Scientist's evaluation of the project's technical approach.				
97284	Restoration of Prince William Sound Pink Salmon through Test Fishery Project	B. Henrichs/Native Village of Eyak	DOI	New 1st yr. 3 yr. project		\$511.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Pink salmon egg mortality attributed to oiling of anadromous streams from the <i>Exxon Valdez</i> oil spill has contributed to a reduction in adult pink salmon returns. Natural populations of pink salmon are harvested with large numbers of hatchery pink salmon in mixed stock fisheries, which may limit escapement to damaged streams and thereby delay recovery. This project will evaluate the feasibility of changes in hatchery production to reduce exploitation of injured wild stocks. Specific projects will focus on changing the location and timing of hatchery returns in western Prince William Sound.			<u>Chief Scientist's Draft Recommendation</u> This project would conduct surveys of salmon streams in Prince William Sound in order to locate populations of pink and chum salmon to use in developing hatchery runs with altered location and timing. Altered runs could alleviate harvest pressure on wild stocks in western Prince William Sound. An alternative approach would be to use aggressive time and area fishery closures. Until a policy decision is made on whether altered run timing and remote releases should be pursued, this proposal is premature. The proposers are qualified to carry out the work. To be most cost effective, any future proposals should indicate the extent to which existing information at ADF&G can be used to identify the desired wild brood stock. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund based on Chief Scientist's recommendation.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97321-BAA	Model Integration of Pink Salmon Restoration	C. Coutant and W. VanWinkle/Oak Ridge National Laboratory	NOAA	New 1st yr. 2 yr. project		\$214.0	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

This project would develop a population model of pink salmon to integrate field-based knowledge of oil-spill effects. The first year would develop a model to predict the recovery rate of pink salmon populations in response to oil spills and similar disturbances by integrating impacts on incubation success, straying, adult mortality, and changes in food web dynamics. The second year would use the model to evaluate restoration and management strategies including variation in the size of hatchery smolt releases, supplementation of spawning habitat, and regulation of fishing.

Chief Scientist's Draft Recommendation

This is a technically sound proposal to integrate much of the available information from ADF&G studies into a pink salmon production model; for Prince William Sound. This model should provide some of the synthesis effort needed to bring the results of past studies to bear on future management of this important resource. This project will make its greatest contribution if it can be coordinated with other syntheses efforts planned for 1997 and beyond.

Executive Director's Draft Recommendation

Do not fund as a separate project. Proposers have a solid idea and are well qualified to carry it out. However, efforts to develop ecological models that integrate information gathered in EVOS studies will be initiated under Project /300 in FY 97.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Pacific Herring					\$930.6	\$1,222.7	\$534.9	\$437.6	\$0.0	\$972.5
97162	Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in Prince William Sound	G. Marty/UC Davis; R. Kocan/UW, C. Kennedy & A. Farrell, Simon Fraser Univ.	ADFG	Cont'd 3rd yr. 4 yr. project	\$510.6	\$538.3	\$512.5	\$437.6	\$0.0	\$950.1
<u>Abstract</u> Field and controlled laboratory studies will focus on viral hemorrhagic septicemia virus and <i>Ichthyophonus hoferi</i> , a pathogenic fungus, to determine their role in the disease(s) and mortality observed in Prince William Sound herring since 1993. Herring will be monitored throughout the year for signs of disease and immune status, while specific pathogen-free herring will be used to determine the degree of mortality, blood chemical changes, and pathogenicity produced by these organisms alone and in combination with exposure to stressors such as petroleum hydrocarbons, temperature and crowding.		<u>Chief Scientist's Draft Recommendation</u> This is a technically excellent ongoing program that is contributing greatly to our understanding of the causes of the population crash of herring in 1993-94, and the recovery of the population from pathogenic effects. The investigators are well qualified, with laudable publication records. The project appears to be cost-effective, although reductions of approximately \$20k appear to be possible without sacrificing the overall objectives of the program. Fund.		<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a reduced budget. This project investigates the potential link between oil exposure and disease in herring, and between disease and the herring population decline in PWS. Understanding the causes of the decline and the lack of recovery is important for restoration of the herring population in Prince William Sound and resumption of the herring fishery.						
97165	Genetic Discrimination of Prince William Sound Herring Populations	J. Seeb/ADFG	ADFG	Cont'd 3rd yr. 4 yr. project	\$120.0	\$121.9	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> The Prince William Sound herring fishery has been in catastrophic decline since 1992. The Alaska Department of Fish and Game recovery effort includes incorporating a knowledge of genetically-derived population structure into harvest management. This continuing project is delineating the structure of Prince William Sound population(s) and related North Pacific populations using both nuclear and mitochondrial DNA analyses. Tests for temporal and spatial diversity within years and temporal stability across years will be conducted.		<u>Chief Scientist's Draft Recommendation</u> Similar to the pink salmon genetics project (97196), there is a need to identify at what level genetic variability is important for application of these results to management. This is a good proposal and it should go forward. However, the proposal does not provide enough detail on how the microsatellite data will be analyzed. This project appears not to be very cost effective. Fund, but at a reduced level.		<u>Executive Director's Draft Recommendation</u> Defer until FY 96 results have been analyzed. If continuation of the project is recommended, funding should be contingent on receipt of the reports due on 95191A and 95255. Project 97165 is intended to address basic questions about the genetic composition of PWS herring in relation to other North Pacific populations. When setting harvest limits, it is important to know whether there exists one or more genetically distinct populations.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97166-CLO	Herring Natal Habitats	M. Willette/ADFG	ADFG	Cont'd 4th yr. 6 yr. project	\$300.0	\$260.7	\$22.4	\$0.0	\$0.0	\$22.4

Abstract

The *Exxon Valdez* oil spill coincided with the spring migration of Pacific herring to spawning grounds in Prince William Sound. Studies of oil spill injuries to herring documented damage from oil exposure in adult herring, reduced hatching success of embryos, and elevated levels of physical and genetic abnormalities in newly hatched larvae. The PWS herring spawning population has drastically declined since 1993, and pathology studies implicated viral hemorrhagic septicemia (VHS) and *ichthyophonus* as potential sources of mortality as well as indicators of stress. This project will monitor the abundance of the herring resource in PWS using SCUBA and hydroacoustic techniques.

Chief Scientist's Draft Recommendation

This project has been carried out for several years since the oil spill to provide basic information about the spawning biomass of Pacific herring in PWS. The proposal for FY 97 would compare egg-based estimates of biomass with biomass estimates obtained from acoustic methods. The reviewers have fundamental questions about the treatment of within-diver variability in the egg estimates and the rigorousness of methodologies for comparisons of techniques for obtaining biomass estimates. The degree to which this project provides data needed by the SEA program is unclear, but may be significant. It has previously been recognized that much of this work is a matter of normal agency management, but there also are questions about the significance of these results to meeting on-going management needs. Defer funding for any new work pending a detailed description of data needed, if any, to support the SEA project (/320); otherwise provide limited close-out funds for a final report.

Executive Director's Draft Recommendation

Fund close-out of the FY 96 project. The current project's objective is to estimate the spawning biomass of herring. The Trustee Council funded this project in FY 96 with the expectation that the project would test a technique for improving management of the herring resource and also would transition to a different funding source beginning in FY 97. The Chief Scientist's recommendation in FY 96 was to provide one year of funding. After reviewing the results of the project and the proposal, the Chief Scientist has raised significant technical concerns about the project that cast doubt on its potential to improve management of the herring fishery. The greatest potential restoration benefit of this project is in providing data to support the Sound Ecosystem Assessment (97320). Do not fund new work unless the Chief Scientist determines that the data that would be collected would support 97320 or are essential for protection of the injured herring resource. If any new work is recommended, funding should be contingent on receipt of the report due on 93024.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97168-BAA	Restoration of Commercial Fishing Services: Social Ecology of the Herring Fishery in Prince William Sound	M. Downs/Impact Assessment, Inc.	NOAA	New 1st yr. 1 yr. project		\$235.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Commercial fishing was disrupted by the Exxon Valdez oil spill. This project addresses the restoration of that service by developing data about pre- and post-spill commercial fishing activity, focusing on the PWS herring fishery. The working hypothesis of this proposal is that restoration of commercial herring fishing services is based on socioeconomic as well as biological factors. Statistical data about the fishery will profile the pre- and post-spill patterns of fishing. Interview data with fisheries participants will describe the dynamics of the fishery and the social and economic factors that affect restoration of the herring fishery and commercial fishery services.			<u>Chief Scientist's Draft Recommendation</u> The socioeconomic impact of the collapsed herring fishery in PWS is of interest. However, the Trustee Council has chosen to restore the resources themselves as the primary means of restoring services, such as commercial fishing. Although this project's methods seem reasonably sound, the reviewers were not persuaded that a project of this depth and scope is necessary. Indeed, its primary value is to document the socioeconomic history of the herring fishery with respect to the oil spill and to aid in the evaluation of whether the service of commercial fishing is restored following restoration of the herring resource (when that happens). However, this project would do nothing to directly restore either the resource or the service. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. This project would investigate factors affecting the recovery of the herring fishery, including adaptations that fishers and processors have made to the lack of product, but would not contribute significantly to the restoration of the herring resource or the commercial herring fishery.				
97248	Collection of Historical Data and Local Environmental Knowledge of Forage Fish and Herring	J. Seltz	ADFG	New 1st yr. 1 yr. project		\$66.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Using personal interviews, surveys, and mapping, this project would collect historical and contemporary knowledge about the ecology of herring and other forage fish and map information on their distribution; create an ascii file of mapped data; and create a subject index of textual information on the ecology and life cycle of the fish by species. Data and reports will be provided to participating projects -- SEA and APEX.			<u>Chief Scientist's Draft Recommendation</u> This project could contribute to the redevelopment of confidence in fish resources by subsistence users, and possibly provide information on recovery using traditional knowledge of pre-spill abundance. The institutional arrangements and project management responsibilities are inadequately defined, and it may be beneficial to formally link this project with other efforts attempting to develop traditional ecological knowledge. Reconsider revised proposal after assessment of all traditional ecological knowledge projects			<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. Evaluate this proposal in the context of 97352, a new project that will address comprehensively the use of traditional ecological knowledge in the restoration program.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom- mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
SEA and Related Projects					\$3,685.0	\$4,988.0	\$3,828.2	\$2,558.0	\$115.0	\$6,576.2
97195	Pristane Monitoring in Mussels	J. Short/NOAA	NOAA	Cont'd 2nd yr. 5 yr. project	\$85.0	\$115.3	\$111.8	\$115.0	\$115.0	\$416.8
<u>Abstract</u> This project will continue to monitor pristane in mussels as an indirect index of potential year-class strength for pink salmon and herring and to identify critical pink salmon and herring marine habitat in Prince William Sound.		<u>Chief Scientist's Draft Recommendation</u> Excellent proposal that holds good promise for development of a measurement for the annual importance of copepod production in PWS food web, and therefore in interannual variability of larval fish (Pacific herring and pink salmon) production. The investigator has a good track record in the EVOS process and the work promises to be publishable in a first line journal. Progress to date has been excellent. The cost of the work is very reasonable. Fund, but defer commitment to 6 rather than 5 years of Trustee Council support, pending subsequent evaluations of progress.			<u>Executive Director's Draft Recommendation</u> Fund contingent on report on Project ST8 being on track. Collecting and measuring pristane in mussels may provide a simple measure of marine productivity, thus allowing predictions about future fisheries production and harvest levels. Project has good community involvement component, working with the participants in the Youth Area Watch (Project /210) and producing an informational brochure.					
97243	Water Resources of Prince William Sound	J. Dorava/USGS	DOI	New 1st yr. 4 yr. project		\$814.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project will provide a baseline of existing water resource conditions using an integrated hydrology, water chemistry and biological health indicators approach. This information will permit analysis of long-term trends of both water quantity and quality in order to monitor recovery of streams that may have been affected by the Exxon Valdez oil spill. Along with assessing present conditions and establishing a baseline for monitoring trends, this study will provide information needed for damage assessment and restoration.		<u>Chief Scientist's Draft Recommendation</u> While some of the results of this work might be useful for some restoration projects, much of this proposal is not directly related to EVOS objectives. Those results that are related to EVOS objectives are not critical to those projects. This project is very expensive, and there are questions about sample and analytical design. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. This project, which would assess the quantity and quality of freshwater discharging to Prince William Sound, is not clearly linked to restoration of an injured resource. In addition, the project is very expensive and the Chief Scientist raised questions about its technical design.					

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97303-BAA	Sentinel Program for Walleye Pollock in the Greater Prince William Sound Area	G. Thomas, T. Kline/Prince William Sound Science Center	NOAA	New 1st yr. 5 yr. project		\$120.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u>			<u>Chief Scientist's Draft Recommendation</u>			<u>Executive Director's Draft Recommendation</u>				
This project will improve stock assessment information on walleye pollock in PWS. Improved stock information will reduce the risk of over-exploitation, promote sustainable harvests and examine the possibility of setting multiple species exploitation rates as a recovery tool for injured resources. A hydroacoustic-midwater trawl survey will be conducted in the late winter to estimate the pollock biomass in locations that have been previously recognized as spawning areas. By using commercial vessels as partners to assess the biomass of spawning concentrations of fish, the people fishing will be involved in the decision-making process. Local knowledge and scanning sonars will be used to locate and map the walleye pollock stocks.			Personnel and institutions are well qualified and the concept of a sentinel fishery of this nature is a good idea. Although this project is basically sound, there are a number of technical questions, such as likely difficulties in detecting among-survey differences and in comparing the efficacy of the fishery against the acoustic survey. There also is fundamental concern that basic stock assessment for pollock should be a normal agency management function and there is little connection between this project and restoration objectives identified by the Trustee Council. Do not fund.			Do not fund. This project, which would conduct population assessments of adult walleye pollock, is not clearly linked to the restoration objectives identified by the Trustee Council. In addition, the Chief Scientist raised questions about the project's technical efficacy.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97320	Sound Ecosystem Assessment (SEA)	T. Cooney, et al.	ADFG	Cont'd 4th yr. 6 yr. project	\$3,600.0	\$3,766.4	\$3,716.4	\$2,443.0		\$6,159.4

Abstract

This project is describing mechanisms of mortality for juvenile populations of pink salmon and Pacific herring in Prince William Sound. This information is being used to create a series of dynamical numerical models and an attendant nominal monitoring program to affect the restoration of these species through management options. The mechanisms influencing the distribution and growth rates of juveniles are being investigated by oceanographic studies. Mechanisms of predation and starvation are being studied by fisheries scientists and marine ecologists.

Chief Scientist's Draft Recommendation

This is an excellent program that has undergone independent and thorough technical review annually. The program should better articulate the practical benefits and applications to be derived from the research, including a schedule for production of potential management tools. Key parameters for routine monitoring of the system to determine likely productivity of pink salmon and herring need to be identified. Continued improvement of the interaction between the modelers and the field scientists is required, as is a plan to integrate the results of SEA with the work of APEX and NVP. In terms of the long-range scope of the program, resolution of the major hypotheses will be necessary over the next year prior to decisions about FY99 funding.

Executive Director's Draft Recommendation

Fund contingent on approval of a revised budget. The program is entering its fourth year and significant progress has been made to address the central SEA hypotheses. The program is now at a turning point when field work is transitioning to modeling and analysis, and close-out of most SEA work is projected for FY 98. Further herring research beyond FY 98 is uncertain and must be reevaluated in the context of other herring work and other restoration proposals. A key issue to be addressed in FY 97 is ensuring that SEA predictive models are useful to/used by resource managers. Further interaction between SEA investigators and resource managers appears needed. Clarification of any long-term data collection and monitoring to support predictive models is also critical to ensure that models can be maintained over time. On-going efforts to integrate the major ecosystem research projects (SEA, NVP and APEX) should be pursued during FY 97 and used to guide future funding decisions. In recognition of additional funding for data and modelling work in FY 97 (\$207,000), total SEA funding in FY 98 is projected to be \$2,443,000 (including agency administrative costs). FY 98 will be the final year for most SEA projects and minimal funding is anticipated for closeout and synthesis in FY 99.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97322-BAA	Jellyfish as Predators and Competitors of Age-0 Fishes	T. Kline/Prince William Sound Science Center, J. Purcell/U of Maryland	NOAA	New 1st yr. 4 yr. project		\$171.3	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

At high densities, jellyfish can seriously affect populations of zooplankton and ichthyoplankton, and may be detrimental to fisheries through direct predation on the eggs and larvae of fish as well as by competition for food with fishes. This project would examine the roles of jellyfish as predators and competitors of fishes, especially Pacific herring and pink salmon, whose populations have not recovered from injury due to the *Exxon Valdez* oil spill. This will be accomplished by participating in ongoing SEA research cruises in Prince William Sound, in which zooplankton, ichthyoplankton, and gelatinous zooplankton distributions and densities will be determined.

Chief Scientist's Draft Recommendation

This is a good project, but there are significant questions about sample design. The importance of jellyfish as a predator on juvenile pink salmon and juvenile herring is highly speculative, and there is not sufficient evidence presented in this proposal to justify a full-scale investigation. A more limited preliminary survey might be justified, but is a lesser priority in FY 1997. Do not fund.

Executive Director's Draft Recommendation

Do not fund. The justification for investigating the role of jellyfish as a predator on juvenile pink salmon and juvenile herring is not clear. In addition, the Chief Scientist raised questions about the project's technical design.

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	Sockeye Salmon				\$391.0	\$1,390.1	\$422.2	\$7.1	\$0.0	\$429.3

97048-BAA	Analysis of Historical Sockeye Salmon Growth Among Populations Affected by Overescapement in 1989	G. Ruggerone/Natural Resources Consultants, Inc.	NOAA	Cont'd 2nd yr. 1 yr. project	\$0.0	\$31.9	\$0.0	\$0.0	\$0.0	\$0.0
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Abstract

Overescapement of sockeye salmon occurred in several areas of Alaska following the *Exxon Valdez* oil spill. Overescapement appears to have reduced salmon growth, leading to reduced survival in freshwater. However, the lack of information on marine survival of salmon confounds the interpretation of oil spill effects on adult sockeye returns. Research has shown that scale growth of Chignik sockeye salmon during the first and second years at sea is correlated with adult returns. This project will analyze marine growth of nine populations, including five populations affected by the oil spill, in an effort to separate freshwater and marine effects on adult returns.

Chief Scientist's Draft Recommendation

This project is a continuation of a program that was highly rated on technical merit at its initiation and provides benefits in terms of understanding damages to sockeye salmon populations. However, this project was proposed only for a single year of funding, and any additional support should be a lower priority.

Executive Director's Draft Recommendation

Do not fund. This project, which is synthesizing information on overescapement of sockeye salmon, was funded by the Trustee Council as a one-year project in FY 96. Although the project has worthwhile objectives, the funds requested for FY 97 are primarily to cover cost overruns experienced since the Trustee Council took action in FY 96.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97239	Salmon Carcasses and Juvenile Chinook Salmon Production in the Kenai River Ecosystem	D. Schmidt/ADFG	ADFG	New 1st yr. 2 yr. project		\$136.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would investigate the role sockeye salmon carcasses play in primary and secondary production within the Kenai River and the potential symbiotic role sockeye salmon escapements have on nutrients and secondary productivity. An ecosystem approach to restoration of this system requires examination of the role salmon carcasses play in freshwater life history of other species. Chinook salmon production may be positively influenced by nutrient additions to the Kenai River. An important feature of the Kenai River studies is to ascertain if there are significant benefits to chinook salmon juveniles with increased escapements. <u>Chief Scientist's Draft Recommendation</u> This is a technically very good proposal that will explore the fertilizing effect of sockeye salmon on the Kenai R. ecosystem, including Chinook Salmon. However, the proposal could benefit from taking a wider ecological perspective and expanding the questions to include effects on sockeye cycling. The experimental design needs elaboration and possible revision. Investigators are extremely well qualified and productive. The proposal is responsive to public interest in restoring and sustaining Kenai R. fisheries. Proposal also evaluates broad effects of sockeye overescapement, which may be ecologically and economically (to Chinook fishery) beneficial. Fund. <u>Executive Director's Draft Recommendation</u> Defer decision on funding until more information on project's feasibility and management application are provided and technical concerns identified by Chief Scientist are addressed. If funded, funding should be contingent on approval of a reduced budget not to exceed \$127.5. This project is intended to contribute to an ecosystem-level understanding of the Kenai River system by examining the benefits of sockeye escapement to other in-river processes, for example production of chinook salmon. The information sought by this project would be used by fisheries managers in setting escapement goals for the Kenai River system.										
97251	Akalura Lake Sockeye Salmon Restoration	S. Honnold/ADFG	ADFG	New 1st yr. 6 yr. project		\$388.7	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would restore natural production of Akalura Lake sockeye salmon through: 1) further assessment of lake rearing environment and evaluation of juvenile and adult life history parameters limiting sockeye production ; and 2) through the use of established restoration techniques to increase juvenile abundance, survival and adult production. <u>Chief Scientist's Draft Recommendation</u> This project is appropriate for sustained salmon management. However, it lacks linkage to restoration objectives and injury from the oil spill. It is not clear that continued depressed status of adult escapements to Akalura Lake is an oil spill effect in light of limnological and smolt production data. Do not fund. <u>Executive Director's Draft Recommendation</u> Do not fund. Project has weak link to EVOS and restoration objectives established by the Trustee Council.										

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97254	Delight and Desire Lakes Restoration Project	N. Dudiak/ADFG	ADFG	New 1st yr. 6 yr. project		\$129.3	\$122.2	\$7.1	\$0.0	\$129.3
<u>Abstract</u> The project would accelerate the recovery of the currently depressed wildstock sockeye salmon of Delight and Desire lakes through lake fertilization. Application of liquid fertilizer would increase the forage base for rearing sockeye salmon fry through nutrient enrichment. The expected result would be larger, more numerous sockeye smolt with a corresponding increase in marine survival rates.			<u>Chief Scientist's Draft Recommendation</u> This appears to be, in theory, a reasonable resource replacement proposal. However, there is a risk that the fertilization may not work and the fish may not actually be harvestable at a time that would make them suitable replacements. Funding may be appropriate if enough questions can be answered to reduce the risk of project failure.			<u>Executive Director's Draft Recommendation</u> Fund pre-fertilization study only (one year of funding, plus report writing costs in FY 98), contingent on (1) approval of a revised Detailed Project Description that addresses the technical concerns raised by the Chief Scientist, (2) the Alaska Department of Fish and Game and/or the Lower Cook Inlet Fisheries Development Association obtaining commitments from other sources for funding the lake fertilization phase of the project, and (3) approval of a revised budget at a reduced level. The project is designed to restore Delight and Desire lakes to their former roles in the commercial and sport fisheries in lower Cook Inlet. The lakes are located on Port Graham Corporation lands, and the project has been endorsed by the corporation.				
97255-CLO	Kenai River Sockeye Salmon Restoration	L. Seeb, J. Seeb, K. Tarbox/ADFG	ADFG	Cont'd 6th yr. 6 yr. project	\$100.0	\$193.3	\$100.0	\$0.0	\$0.0	\$100.0
<u>Abstract</u> This is a close-out project. The goal of this 6-year project is restoration of Kenai River sockeye salmon through improved stock assessment capabilities and more accurate regulation of spawning levels. Results from this study are currently being used in the management and restoration of Kenai River sockeye salmon injured in the oil spill.			<u>Chief Scientist's Draft Recommendation</u> This is a technically sound proposal. However, the stock assessment and stock identification products are those which salmon harvest management programs routinely require. The Trustee Council has supported the development of the tools being applied by this project over several years on the theory that their application would be essential to harvest management of depressed and damaged salmon stocks. At this time, the risk of catastrophically low salmon runs which warrant further restoration efforts would appear extremely remote. Do not fund			<u>Executive Director's Draft Recommendation</u> Fund project close-out (completion of data analysis and preparation of final report/manuscript) contingent on (1) approval of a reduced budget and (2) receipt of reports on projects 95191A and 95255. This concludes a 5-year effort to more accurately regulate spawning levels using improved sockeye salmon stock assessment capabilities. Continuation of effort should be taken over by the Alaska Department of Fish and Game as part of its normal management responsibility. The information provided by this project is being used by fisheries managers to modify fishing areas and openings in order to improve management of Kenai River and other Upper Cook Inlet sockeye salmon stocks, which were injured when escapement goals were greatly exceeded following the oil spill.				

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97258A-CLO	Sockeye Salmon Overescapement Project	D. Schmidt/ADFG	ADFG	Cont'd 7th yr. 10 yr. project	\$150.0	\$289.9	\$150.0	\$0.0	\$0.0	\$150.0
<u>Abstract</u> This proposal is a close-out budget for the Kodiak Island sockeye salmon studies and a monitoring program for Kenai River sockeye salmon. The Kenai studies will focus on evaluation of existing data and limited monitoring of the key variables affecting sockeye production. Most of the project's funding will be directed at completing the FY 96 Kodiak sample analysis and evaluation of the existing Kenai database. These studies are developing production models for restoration of the system.			<u>Chief Scientist's Draft Recommendation</u> This project has produced much scientific evidence relevant to the evaluation of the effects of overescapement. Our ability to gain additional understanding is limited by the uncertainty of estimates achieved with state-of-the-art data acquisition technologies. Development of a production model for the Kenai River sockeye salmon that accounts for trophic interactions is not relevant to restoration objectives. Harvest management control of the system appears to be adequate in the absence of the work products identified in this proposal. The strategy for the recovery and restoration effort of the Trustee Council was to develop enhanced management capabilities for damaged resources, and that goal has been achieved. Do not fund.			<u>Executive Director's Draft Recommendation</u> Fund project close-out only (preparation of final report/manuscript on Kenai Peninsula studies; close-out funds for Kodiak Island studies were provided in FY 96) contingent on approval of a revised Detailed Project Description and budget that reflect close-out only. This concludes a 3-year effort to examine the effects of sockeye overescapement in the Kenai River system and in Red and Akalura lakes on Kodiak Island. The project has met its primary objective, which was to develop enhanced management capabilities for sockeye populations injured by the oil spill.				
97259-CLO	Restoration of Coghill Lake Sockeye Salmon	G. Kyle/ADFG	ADFG	Cont'd 5th yr. 7 yr. project	\$141.0	\$220.2	\$50.0	\$0.0	\$0.0	\$50.0
<u>Abstract</u> Returns of sockeye salmon to Coghill Lake have declined from a historical average of 250,000 to less than 10,000 in recent years. Beginning in 1993, the Trustee Council has funded a program to fertilize Coghill Lake to increase zooplankton levels, which in turn would benefit juvenile sockeye growth and survival. This proposal would continue the fertilization effort.			<u>Chief Scientist's Draft Recommendation</u> This program was initiated in 1993 to restore the sockeye salmon run in Coghill Lake through fertilization and supplementation. Primary and secondary productivity in the lake is now at an acceptable level, smolt production is at an acceptable level, and adult escapements within the optimum range are being produced. Restoration objectives have therefore been achieved. In addition, I continue to be concerned about harvest of high levels of returning adults (see Table 1 in 1995 annual report) which compromise the restoration benefits. Do not fund.			<u>Executive Director's Draft Recommendation</u> Fund project close-out (preparation of final report) contingent on approval of a revised Detailed Project Description and budget that reflect close-out only. This concludes a 4-year effort to increase the productive capacity of Coghill Lake. Although the Trustee Council originally planned to fund 5 years of fertilization, the project has met its primary objectives -- primary and secondary productivity in Coghill Lake are at acceptable levels, smolt production is at an acceptable level, and adult escapements within the optimum range are being produced.				

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	Cutthroat Trout and Dolly Varden				\$200.0	\$1,113.1	\$283.2	\$100.0	\$0.0	\$383.2
97043B-CLO	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures	D. Gillikin/USFS	USFS	Cont'd 2nd yr. 5 yr. project		\$24.0	\$24.0	\$0.0	\$0.0	\$24.0
<u>Abstract</u> This project provides for monitoring of habitat improvement structures and their effects on cutthroat trout and dolly varden populations. These structures were installed in 1995 under Project 95043B. There has been concern raised that habitat structures may inadvertently increase coho salmon populations, and thereby increase competition stress on dolly varden and cutthroat trout populations. This monitoring will seek to address those questions and concerns.			<u>Chief Scientist's Draft Recommendation</u> FY97 funding for this project will complete this multi-year study and allow determination of the performance of habitat improvements made to restore injured fish species. Fund.			<u>Executive Director's Draft Recommendation</u> Fund close-out. This project monitors the effectiveness of cutthroat trout and Dolly Varden habitat improvement structures installed in FY 95. The structures were monitored in FY 96 and should be monitored one additional year.				
97145	Cutthroat Trout and Dolly Varden: Relation Among and Within Populations of Anadromous and Resident Forms	G. Reeves/USFS, Pacific Northwest Research Station	USFS	Cont'd 2nd yr. 3 yr. project	\$200.0	\$229.7	\$229.7	\$100.0	\$0.0	\$329.7
<u>Abstract</u> This project would determine the relation between resident and anadromous forms of dolly varden and cutthroat trout within the same watershed and between watersheds in Prince William Sound. It would examine genetic, meristic, and life-history features of each group in FY 96 and FY 97. Results from this study would allow development of a long term, comprehensive and ecologically sound restoration strategy for these fish.			<u>Chief Scientist's Draft Recommendation</u> This project is extremely critical for developing a restoration strategy for Cutthroat Trout and Dolly Varden. Several other very good proposals have been made for work on these species, but they cannot be implemented until their relationship to an overall recovery strategy is identified. Therefore, this project's contribution to the development of this strategy is important. It will be important to review results obtained after 1996 field work is complete. Fund.			<u>Executive Director's Draft Recommendation</u> Fund. This project defines relationships among stocks and life history forms (e.g., anadromous and resident), refines understanding of the nature and extent of oil spill injury and may confirm whether recovery has occurred. The results of this study will be used to develop a restoration strategy for cutthroat trout and Dolly Varden. This information has direct implications for management of sport fisheries in Prince William Sound and nationwide, and the USFS is providing significant support for this project.				

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97172	Cutthroat Trout and Dolly Varden Recovery in Prince William Sound	A. Hoffman/ADFG	ADFG	New 1st yr. 4 yr. project		\$402.3	\$0.0			\$0.0
<u>Abstract</u> This project would evaluate recovery of stocks of cutthroat trout and Dolly varden exposed to petrogenic hydrocarbons through estimation of growth and survival at oiled and unoled sites in Prince William Sound. A study conducted by Hepler et al. showed statistically significant reductions in growth at oiled sites, but did not demonstrate statistically significant differences in survival. This study would examine fewer oiled sites than Hepler and would separately address both marine and fresh water components of annual growth and survival that were not addressed in earlier studies.			<u>Chief Scientist's Draft Recommendation</u> This is a good proposal that should be reconsidered once information on population structure of Cutthroat Trout and Dolly Varden has been used to devise an overall strategy for restoration of these injured species. Do not fund			<u>Executive Director's Draft Recommendation</u> Do not fund in FY 97. Reconsider after a restoration strategy for cutthroat trout and Dolly Varden has been developed. The restoration strategy, which depends on the results of \145, will be developed during FY 97.				
97174	Cutthroat Trout and Dolly Varden in PWS: Restoration Project Support and Coordination	A. Hoffman/ADFG	ADFG	New 1st yr. 4 yr. project		\$157.5	\$16.7			\$16.7
<u>Abstract</u> This project will conduct field work to collect data required to support other Trustee Council projects and work to coordinate the development and implementation of cutthroat trout and Dolly varden restoration strategies. Involvement and information has been requested from ADFG on previous studies on cutthroat trout and Dolly varden funded by the Trustee Council. There is currently no mechanism for coordinating these projects or integrating the results into a management plan.			<u>Chief Scientist's Draft Recommendation</u> Strategic planning portion of this project (objective A1) would be very useful during FY 97 as plans for recovery actions for field seasons in 1998 and beyond are formulated. Objective A2 is a good proposal that should be reconsidered once information on population structure of Cutthroat Trout and Dolly Varden has been used to devise an overall strategy for restoration of these injured species. Fund, but only objective A.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and budget that address only Objective 1. ADFG will coordinate with other agencies conducting restoration projects on cutthroat trout and Dolly Varden to identify management strategies for the protection and recovery of injured populations. This information should be compiled early in FY 97 for use in formulating a restoration strategy for these species. Reconsider Objective 2, an inventory of cutthroat trout in Prince William Sound, after a restoration strategy for cutthroat trout and Dolly Varden has been developed				

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97242	Characteristics of the Cutthroat Trout Resources of Prince William Sound	J. Dorava & B. Black/USGS	DOI	New 1st yr. 3 yr. project		\$265.4	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> The characteristics of the cutthroat trout population and the available habitat in Prince William Sound will be investigated following the protocols of the National Water Quality Assessment (NAWQA) program. Twenty sites around the Sound will be investigated during the first year of this project as a supplement to a water resources monitoring program proposed as part one of a two-part NAWQA-style study. Additional characterization of seasonal variations in cutthroat trout populations and habitat will be investigated at five index sites in the second and third years.		<u>Chief Scientist's Draft Recommendation</u> This is a good proposal that could be reconsidered once information on population structure of Cutthroat Trout and Dolly Varden has been used to devise an overall strategy for restoration of these injured species. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund in FY 97. Reconsider after a restoration strategy for cutthroat trout and Dolly Varden has been developed. The restoration strategy, which depends on the results of /145, will be developed during FY 97.						
97302	Prince William Sound Cutthroat Trout, Dolly Varden Char Inventory	K. Hodges/USFS	USFS	New 1st yr. 2 yr. project		\$34.2	\$12.8		\$0.0	\$12.8
<u>Abstract</u> The status of anadromous Dolly Varden char and cutthroat trout populations in Prince William Sound is not known. Consultation with local residents revealed that these species are more widespread than previously believed. This project would investigate a number of remote stream and lake systems to determine whether these species are present and their relative abundance. If these species are more widespread or abundant than previously believed, additional enhancement efforts may not be necessary. This project will also provide information for ongoing genetics studies by determining how isolated the populations are from each other and whether interbreeding is likely.		<u>Chief Scientist's Draft Recommendation</u> This project contains good ideas, but it is competing with far more sophisticated proposals to do the same type of work. The site determination phase of this proposal, if coordinated with other concerned state and federal entities, could make a valuable contribution to development of recovery strategy during FY97. consider funding later at reduced level.		<u>Executive Director's Draft Recommendation</u> Fund the site determination element contingent on approval of a revised Detailed Project Description and budget. Local knowledge will be used to determine which streams in PWS are known to have populations of cutthroat trout and Dolly Varden. This information could be useful in developing a restoration strategy for these species. The restoration strategy, which depends on the results of 145, will be developed during FY 97. Reconsider the other element of the project, estimation of the relative abundance of cutthroat trout and Dolly Varden, after a restoration strategy for these species has been developed.						

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Marine Mammals					\$687.3	\$814.1	\$461.1	\$260.0	\$50.0	\$771.1
97001	Recovery of Harbor Seals From EVOS: Condition and Health Status	M. Castellini/UAF	ADFG	Cont'd 3rd yr. 4 yr. project	\$192.3	\$195.5			\$0.0	\$0.0

Abstract

This project focuses on the health of harbor seals, a marine mammal species that is not recovering in Prince William Sound. Personnel from the University of Alaska in cooperation with the Alaska Department of Fish and Game will continue and expand work with harbor seals to assess their health, blood metabolites, blubber chemistry and size in relation to their ecological and nutritional requirements. The project addresses potential health and nutritional problems that may be impeding harbor seal recovery. In FY 97, the project greatly expands collaborative work with Native hunters through the Alaska Native Harbor Seal Commission and will initiate work in FY 98 at the Alaska SeaLife Center.

Chief Scientist's Draft Recommendation

No recommendation pending receipt of additional peer review.

Executive Director's Draft Recommendation

No recommendation yet. The proposal is still under review. If the project is funded, funding should be contingent on receipt of the final report on 95117-BAA.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97012-BAA	Comprehensive Killer Whale Investigation in Prince William Sound	C. Matkin/North Gulf Oceanic Society	NOAA	Cont'd 5th yr. 5 yr. project		\$157.5	\$0.0			\$0.0
<u>Abstract</u> This project continues the monitoring of the damaged AB pod and other Prince William Sound killer whales that has occurred on a yearly basis since 1984. It provides further analysis of a GIS database on killer whales. When coupled with genetic and acoustic data, the analysis will evaluate recovery of killer whales, recognize changes in behavioral ecology, estimate killer whale predation on harbor seals, and estimate impacts of the harbor seal decline on the potential recovery of killer whales. Year round residency of killer whales will be assessed using a remote hydrophone system. Environmental contaminant levels in the blubber of specific whales will be determined and potential effects on recovery evaluated.			<u>Chief Scientist's Draft Recommendation</u> This proposal is excellent, combining well-established techniques and some innovative methods. The publication record of the principal investigator is improving. In keeping with the recommendations of the Chief Scientist in FY96, a review of killer whale recovery is necessary before committing additional funds. Defer funding until after review in fall of 1996.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until a review of the recovery status of killer whales has been completed.				
97064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	K. Frost/ADFG	ADFG	Cont'd 3rd yr. 5 yr. project	\$347.0	\$317.8	\$317.8	\$150.0	\$50.0	\$517.8
<u>Abstract</u> This project will monitor the status of harbor seals in Prince William Sound and investigate the possible causes for the ongoing decline. Aerial surveys will be conducted to determine whether the population continues to decline, stabilizes, or increases. Seals will be satellite-tagged to describe their movements, use of haulouts, and hauling out and diving behavior. Samples of blood, blubber, whiskers, and skin will be collected to study diet, health and condition, and genetic relationships to other harbor seal populations.			<u>Chief Scientist's Draft Recommendation</u> This project continues to investigate the decline of harbor seals in the oil spill area. The research addresses most of the most potentially useful lines of investigation. The investigators are well qualified and the costs of the research appear reasonable. Fund.			<u>Executive Director's Draft Recommendation</u> Fund. This study explores reasons for the long-term decline in harbor seals: food limitations, disease, reproduction and killer whale predation. The results of this study will enable resource managers, subsistence users, and others to focus their efforts and concern on the most probable causes of harbor seal population decline. In FY 97, the focus of this project will shift to the survival and health of juvenile harbor seals.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97170	Isotope Ratio Studies of Marine Mammals in Prince William Sound	D. Schell/UAF-IMS	ADFG	Cont'd 2nd yr. 3 yr. project	\$148.0	\$143.3	\$143.3	\$110.0	\$0.0	\$253.3

Abstract

This project uses natural stable isotope ratios to assess trophic structure and food webs in Prince William Sound and contributes to the studies by ADFG personnel to determine the reasons for the decline of harbor seal populations. Through a mix of captive animal studies, comparison of isotope ratios in archived and current marine mammal tissues and their potential prey species in PWS, insight into environmental changes causing the decline may be possible. In addition, by providing analytical services for mass spectrometry it contributes to the SEA program's effort to describe the food chains supporting commercial fishes impacted by the *Exxon Valdez* oil spill.

Chief Scientist's Draft Recommendation

Excellent proposal that holds good promise for an independent perspective on structure of the PWS food web supporting Pacific herring, pink salmon, harbor seals, and other injured species. This work is by its nature highly integrated with many other ecological projects being conducted in the oil spill area, including the harbor seal work in 244. The investigator has a good track record in the EVOS process and the work promises to be publishable in top-notch journals. Progress up to now is excellent. The cost of the work is very reasonable, given the costs for commercial analyses of stable isotopes. Fund

Executive Director's Draft Recommendation

Fund. This project provides technical support for 97064, which may help explain why harbor seal populations have declined. The project will also assist the SEA program (97320) by describing the food chains that support important commercial fisheries in PWS.

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	Nearshore Ecosystem				\$1,869.3	\$3,616.8	\$2,145.8	\$1,753.7	\$524.8	\$4,648.7
97025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators	L. Holland-Bartels, et al/NBS-DOI	DOI	Cont'd 3rd yr. 5 yr. project	\$1,669.4	\$2,044.8	\$1,669.4	\$1,669.4	\$450.0	\$3,788.8
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
The Nearshore Vertebrate Predator project (NVP) makes an integrated assessment of trophic, health, and demographic factors across a suite of APEX predators injured by the spill to determine mechanisms constraining recovery and to improve knowledge of the status of recovery. Primary hypotheses are: 1) Recovery of nearshore resources injured by EVOS is limited by recruitment processes; 2) Initial and/or residual oil in benthic habitats and in or on benthic prey organisms has had a limiting effect on the recovery of benthic foraging predators; and 3) EVOS-induced changes in populations of benthic prey species have influenced the recovery of benthic foraging predators.		This project uses an ecosystem approach to examine recovery of injured species in the nearshore ecosystem, and it was reviewed in depth at a workshop in February 1996. Requests for funding of the invertebrate and avian copredator components should be deferred until the first-year data can be examined to determine if copredation effects are significant. In addition, the request for funds to prepare pre-NVP sea otter publications should be deferred until agreement is reached regarding outstanding reports from NRDA project MM6. Budget increases over previous projections for on-going components (i.e., not including the avian copredator component) are substantial, and these increases should be carefully reviewed and decreased if possible.		Fund all components except avian copredator (USFS \$141.5), invertebrate predator (University of Washington \$42.6), and sea otter publications (\$20.0) contingent on (1) approval of revised budget at a reduced amount and (2) submittal dates. Defer decision on funding avian and invertebrate components until FY 96 data has been examined. Defer decision on funding sea otter publications until resolution of reports due on Project MM6. In addition, the researchers conducting sea otter surveys under this project should explore ways of involving local sea otter hunters in their research/monitoring efforts (see Project 97282). In general, the nearshore ecosystem, including intertidal habitat and organisms, was the area hardest hit by the oil spill. This project monitors recovery of intertidal organisms and closely linked vertebrate predators and addresses the question of whether continuing contamination is slowing recovery of vertebrate predators.						
97090	Mussel Bed Restoration and Monitoring	M. Babcock/NOAA	NOAA	New 6th yr. 6 yr. project	\$0.0	\$17.6	\$10.0	\$0.0	\$0.0	\$10.0
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
This proposal is for finalizing three additional manuscripts from the four-year, comprehensive final report due September 30, 1996.		This is a solid proposal to publish the results of important work on oiled mussel beds. The investigator has a good record of producing results and publications. Recommend funding at reduced level (e.g., about \$10K).		Fund contingent on (1) approval of a revised budget at the reduced level of \$10,000 and (2) receipt of report on 95090. This project would publish the results of five years of studies funded by the Trustee Council on the persistence of oiling in mussel beds in Prince William Sound and the Gulf of Alaska and restoration of 12 of these beds.						

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97157-BAA	Intertidal Monitoring Using Carbon and Oxygen Isotope Indicators of Bivalve Impact and Recovery in Nearshore Ecosystem Habitats	M. Morgenstein and D. Shettel/Geosciences Mgt., Inc.	NOAA	New 1st yr. 5 yr. project		\$85.3	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would develop the following method which will assess the AMS and standard 14, 13, 12C and 18, 16O isotope compositions of selected bivalve species from three different shoreline sensitivity-type environments within Prince William Sound to acquire a direct measure of the degree and duration of injury to mussels and clams. If the method developed in the first year is successful, the second to fifth years will acquire impact and recovery data on more species and in a wider area of nearshore environments including the Kenai Peninsula and Kodiak Archipelago.		<u>Chief Scientist's Draft Recommendation</u> This is an interesting idea, but one that is unproven in concept. I do not believe that funding this exploratory work, even if it were to yield an historical record of the spill in the shells of bivalves, is an investment that will pay off for the on-going restoration program. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. Weak link to restoration objectives adopted by Trustee Council. In addition, Chief Scientist raised concerns about project's technical approach.						
97158	Monitoring Nearshore Ecosystems in Katmai National Park, Alaska Peninsula	B. Goatcher/Katmai National Park	DOI	New 1st yr. 4 yr. project		\$56.4	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Nearshore ecosystems of the Alaska Peninsula have not recovered seven years after the <i>Exxon Valdez</i> oil spill. Understanding basic aspects of key nearshore species' life histories is critical to interpreting ongoing studies, assessing recovery, and prescribing further restoration activities. This proposal focuses on development of integrated monitoring protocols for several nearshore species injured by the oil spill.		<u>Chief Scientist's Draft Recommendation</u> Since we do not have solid prespill data from the Katmai coast, it is unclear how recovery can be gauged in this area. The sampling and analysis of prey could be greatly improved, and the proposal lacks a power analysis in regard to the ability of the surveys to detect changes. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The primary value of this project is documentation of injury and recovery of nearshore predators with few management applications. In addition, because there are no prespill data from the Katmai coast, it is unclear how recovery can be measured in this area.						

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97161	Differentiation and Interchange of Harlequin Duck Populations Within the North Pacific	B. Goatcher/Katmai National Park	DOI	Cont'd 2nd yr. 3 yr. project	\$78.9	\$104.4	\$98.6	\$9.5	\$0.0	\$108.1
<u>Abstract</u> Restoration efforts for harlequin ducks require an assessment of spatial population structuring and movements among geographic regions to understand the extent of past and ongoing injury, to interpret measures of recovery, and to determine limitations to recovery and restoration strategies. This project would use genetic analyses and color-marking to determine the degree of spatial population structuring among harlequin ducks from broad geographic regions throughout their North Pacific molting and wintering ranges, including areas directly affected by the Exxon Valdez oil spill.			<u>Chief Scientist's Draft Recommendation</u> This is a promising attempt to determine population differentiation in harlequin ducks in the northern Gulf of Alaska, using two complementary techniques (genetics and banding). I am interested in successful completion of this 2-year project. Fund, but there may be need for additional guidance based on review of '96 results.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised budget. This project will improve understanding of the population differentiation and movement among geographically separate groups of harlequin ducks in the northern Gulf of Alaska. This information will contribute to restoration and management goals in Prince William Sound and elsewhere in the spill area.				
97181-BAA	Prince William Sound Intertidal Recovery Monitoring	J. Houghton/Pentec Environmental, Inc.	NOAA	New 1st yr. 4 yr. project		\$299.4	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> By the end of FY 96 eight years of data on the recovery of intertidal assemblages will have been gathered at various beaches in Prince William Sound under an ongoing NOAA program. This program provides significant insight into the bio-physical factors affecting recovery and has documented considerable instability in community structure on hot-water washed beaches. This project would extend the sampling protocol of the NOAA program to intertidal areas sampled under the 1990-1991 Coastal Habitat Restoration (R102) project. This approach will establish the state of recovery over a broader area of Prince William Sound and increase our ability to generalize about factors affecting recovery rates and processes.			<u>Chief Scientist's Draft Recommendation</u> This project could add to our understanding of the status and processes of recovery in the intertidal, but there is question whether the likely results are cost effective at a price exceeding \$1.2 million over four years. In addition, the non-random design and difficulty in establishing the treatment history of the NRDA sites make interpretation of the results difficult. This project is strong on synthetic integration, but is not as rigorous as the competing proposal, 97227. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal was submitted in response to Invitation and would contribute to the understanding of injury and recovery in intertidal areas. However, the Chief Scientist has technical concerns, including the difficulty in establishing the treatment history of NRDA sites. An intertidal proposal will be solicited again in the FY 98 Invitation, at which time more direction will be provided regarding the structure of the desired study.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97223-BAA	Integration and Publication of Pre- and Post-Spill Data on Sea Otter Reproduction, Survival, Development, and Health	L. Rotterman and C. Monnett/Enhydra Research	NOAA	New 1st yr. 1 yr. project		\$79.0	\$40.0	\$0.0	\$0.0	\$40.0
<u>Abstract</u> This project will result in publication of: a) new analyses, integration, and comparison of unpublished, directly comparable, pre- and post-spill data on the reproduction, development, survival, habitat use, and movements of sea otter females, pups, and weanlings; b) generation of benchmarks against which to gauge sea otter population status relative to recovery; c) new information on habitat acquisition benefits; and d) information key to evaluating response strategies.		<u>Chief Scientist's Draft Recommendation</u> Demographic information already existing in final reports delivered by the PIs represents a potentially valuable contribution to the literature on population biology of sea otters in Alaska. Therefore, it is recommended that a modest amount of funds be provided to convert these reports into peer-reviewed publications. Funding levels should be at 1.5 months/publication for manuscripts #1, #2, #4, and #5, with progress payments made upon completion of each manuscript.		<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and budget that reduce the scope of the project to preparation of four manuscripts (#1 in the proposal -- Health, development, and survival of sea otter pups and weanlings, #2 -- Length-mass relationships in sea otters, #4 -- Survival and reproduction of female sea otters, and #5 -- Age-specific reproduction of female sea otters) for publication in the peer-reviewed literature. This information represents a potentially valuable contribution on the population biology of sea otters in Alaska following the oil spill.						
97227	Status and Recovery of Intertidal Communities	M. Stekoll and R. Highsmith/UAF	ADFG	New 1st yr. 4 yr. project		\$276.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Two major studies involving intertidal organisms impacted by the <i>Exxon Valdez</i> oil spill have been carried out by the University of Alaska (CHIA) and by NOAA. This proposed study will investigate the current recovery status of intertidal communities impacted by the oil spill through integration and comparison analyses of these existing databases for Prince William Sound and through supplemental monitoring of selected oiled habitats in Prince William Sound, Kenai-Cook Inlet, and Kodiak-Alaska Peninsula regions.		<u>Chief Scientist's Draft Recommendation</u> This project would help document injury and recovery status in intertidal areas, which were hit hard by the oil spill. The project would set up two parallel data bases of intertidal injury and recovery and assess whether these can be integrated. While this would be valuable, there is concern that this would be a risky investment without first assessing the compatibility of the data sets. In addition, the on-going NOAA Hazmat monitoring does provide insight into intertidal recovery processes in PWS. This is clearly a rigorous, well conceived project, but I cannot recommend funding at this time.		<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal was submitted in response to Invitation and would help document injury and recovery in intertidal areas. However, the Chief Scientist has concluded that there would be marginal benefit in conducting the work as proposed. An intertidal proposal will be solicited again in the FY 98 Invitation, at which time more direction will be provided regarding the structure of the desired study.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97233	Body Condition of Sea Otters in Prince William Sound	L. Rotterman and C. Monnett/Enhydra Research	NOAA	New 1st yr. 1 yr. project		\$11.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would result in acquisition of data on the body condition of sea otters in Prince William Sound, in acquisition of samples to evaluate whether sea otters continue to be exposed to EVOS hydrocarbons, and in acquisition of samples to evaluate sea otters' overall health. Because of pre-spill baseline information on body condition from the proposer's previous studies, body condition information will be a useful index of whether sea otters in the spill-affected area are recovering.		<u>Chief Scientist's Draft Recommendation</u> Although the authors have extensive experience with sea otters, this proposal presents little in the way of methods to be evaluated. In addition, there apparently is considerable overlap with work on sea otter body condition in NVP (025), and this proposal would rely on NVP for costs of sample analysis. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. Project objectives are currently being funded under Project /025.						
97240	Clam Recruitment: Investigation of Settlement Limitation and Mechanisms Related to Successful Recruitment	G. Irvine/NBS-DOI	DOI	New 1st yr. 5 yr. project		\$237.9	\$0.0			\$0.0
<u>Abstract</u> This project proposes, as a companion to the Nearshore Vertebrate Predator project, to examine whether clams are settlement and/or recruitment limited and to determine what environmental and ecological factors promote successful recruitment. Clams are very highly preferred prey of sea otters and some sea ducks, and their recovery from the <i>Exxon Valdez</i> oil spill is unknown. This project also has linkages to the SEA project and should support restoration activities aimed at increasing local populations of clams for subsistence.		<u>Chief Scientist's Draft Recommendation</u> This proposal has the kernel of several good ideas, including gathering more information on the life history of little-neck clams in the spill area and linking the variability in the pelagic and nearshore ecosystems. However, the effort required in physical oceanography and understanding recruitment processes is likely to be much greater than estimated in the proposal, and critical details of the research plan are missing. A more limited proposal, closely tied to the NVP program to understand supply of juvenile clams could be considered in FY98. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The Chief Scientist has concerns about the project's technical design and the relationship of its objectives to the clam studies currently being funded through the Nearshore Vertebrate Predator project (/025). A more limited proposal more closely tied to /025 could be considered for FY 98.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	J. Short/NOAA	NOAA	Cont'd 6th yr. 11 yr. project	\$121.0	\$77.3	\$74.8	\$74.8	\$74.8	\$448.8
<u>Abstract</u> This project is a continuation of the NRDA and restoration database management, hydrocarbon interpretation and sample storage service. Subsistence, response and restoration data will continue to be incorporated into the Trustee hydrocarbon database. A summary report for investigators and managers will be produced along with an electronic copy of the database that will allow easier access to this information.			<u>Chief Scientist's Draft Recommendation</u> This is an essential project for overall success of the Restoration Program. Future funding should be contingent on an assessment of the numbers of hydrocarbon analysis needed in ongoing projects. Fund.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised budget and an assessment of additional analyses needed to serve on-going projects. Project is on-going analysis of hydrocarbon data for other Trustee Council funded studies. This project will make these data available to the scientific community and the public, including "on-line" via the computer Internet.				
97427	Harlequin Duck Recovery Monitoring	D. Rosenberg/ADFG	ADFG	Cont'd 4th yr. 4 yr. project		\$254.6	\$253.0			\$253.0
<u>Abstract</u> Harlequin duck populations have not recovered from injuries sustained from the oil spill. Proposed surveys are designed to assess the extent of recovery of ducks inhabiting oiled areas and determine if low reproductive success has resulted in changes in population structure and productivity that may limit recovery. Shoreline boat surveys will be used to compare population age and sex structure, distribution, abundance, and productivity between oiled and unoled areas in PWS in late-winter, spring, and late-summer. Changes in population size, structure, and production in oiled and unoled areas within and between years will be compared. Continued population monitoring and brood surveys will allow us to assess trends and suggest factors limiting recovery.			<u>Chief Scientist's Draft Recommendation</u> There continues to be concern about the status of the harlequin duck, especially in regard to reproduction and survival, and this is an important project to track populations of harlequin ducks in PWS. The additional cost for winter surveys, that have the potential to increase knowledge of the dynamics of different sectors of the population, is a justified effort that may help explain population dynamics in western Prince William Sound.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a reduced budget. This project continues basic assessment of the recovery status of harlequin ducks in Prince William Sound, and includes funds for soliciting traditional knowledge from local residents. Future work on this project (FY 98 and beyond) will be considered in the context of the Nearshore Vertebrate Predator project (97025), and an effort will be made to consolidate the harlequin duck work into a single project.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97429	Responses of River Otters to Oil Contamination: Controlled Study of Biological Stress Markers and Foraging Efficiency	T. Bowyer/UAF	DOI	New 1st yr. 2 yr. project		\$72.3	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project is designed to experimentally explore the effects of oil contamination on physiological and behavioral responses of river otters. Fifteen captive otters will be exposed to three levels of oil contamination under controlled conditions. Samples of blood, tissues, and feces will be collected for analysis of biomarkers and immunological and pathological examination. In addition, behavioral observations on foraging efficiency will be conducted to explore the effects of oil contamination on foraging success.		<u>Chief Scientist's Draft Recommendation</u> This is a technically good proposal to validate the use of biomarkers in river otters. It would be desirable to investigate the necessity of sacrificing animals in order to validate previous non-lethal work done in the field. The foraging efficiency portion of the work seems quite weak both methodologically and conceptually. It is likely that the Alaska SeaLife Center will not be able to accommodate this proposal until FY 98, and we invite the investigators to resubmit this proposal at that time with attention to the above comments.			<u>Executive Director's Draft Recommendation</u> Do not fund this year. The Chief Scientist has raised technical questions about this project, which could help interpret contaminant-biomarker data coming from the NVP project (/025). This project should be reconsidered for possible funding in FY 98 when the Alaska SeaLife Center will be available, provided that the technical questions can be resolved.					
Seabird/Forage Fish and Related Projects					\$1,846.2	\$3,655.8	\$2,172.6	\$1,851.5	\$1,820.0	\$6,020.5
97142	Status and Ecology of Kittlitz's Murrelets in Prince William Sound	R. Day/ABR, Inc.	NOAA	Cont'd 2nd yr. 3 yr. project		\$188.5	\$188.5	\$0.0	\$0.0	\$188.5
<u>Abstract</u> This proposal would fund a second year of investigations on the status and ecology of Kittlitz's Murrelet, a rare seabird breeding in glaciated fjords of Prince William Sound (PWS). The study will continue to evaluate the abundance, distribution, habitat use, productivity, and trophic position of this little-known seabird in northwestern PWS. Given uncertainty about the effects of the Exxon Valdez oil spill on this species, a better understanding of its status and ecology is required to ensure its long-term conservation.		<u>Chief Scientist's Draft Recommendation</u> This is a continuing project gathering basic information on a species recently added to the injured species list, which is also being considered for listing under the U.S. Endangered Species Act. The proposal needs to be supplemented to describe the nature of correction factors to be applied to survey data and the rationale for the statistical model (paired t-test) to be used. Fund, but additional recommendations for this project may be provided after review of FY 96 results			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description that addresses concerns raised by the Chief Scientist. The project may be further modified after review of FY 96 results. This study will gather basic information on the Kittlitz's murrelet, which is a rare, poorly known seabird. According to one estimate, a substantial fraction of the world population of this species was killed in the spill. The results of this study may lead to identification of restoration measures.					

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97144	Common Murre Population Monitoring	D. Roseneau/DOI-FWS	DOI	Cont'd 2nd yr. 3 yr. project	\$70.5	\$73.8	\$73.8	\$21.5	\$0.0	\$95.3
<u>Abstract</u> This project continues a population monitoring study that will be conducted in 1996. Murres will be counted at Barren Islands nesting colonies during FY 96 and FY 97. An optional 3rd year of census work at the Chiswell Islands murre colonies is also proposed to supply complementary data from another injured nesting location that will help evaluate the overall recovery status of common murres in the spill area.		<u>Chief Scientist's Draft Recommendation</u> This project would continue monitoring murre colony attendance in the Barren Islands. This is a solid, continuing project, and the PIs are very strong. This work will help bring closure to the recovery status of common murres, which were hit hard by the spill. The proposers recommend visiting the Chiswell Islands in FY 98, and I endorse this recommendation. The reviewers also attach great importance to a population trends manuscript slated for preparation in FY 98. This project complements and aids the APEX project. Fund.		<u>Executive Director's Draft Recommendation</u> Fund. This project will monitor common murre populations on the Barren Islands. Population censuses at the Barren Islands will be very helpful in terms of the APEX study, as well as to track murre recovery at this critical group of colonies. Murre colonies on the Chiswell Islands should be monitored in FY 98.						
97159-CLO	Surveys to Monitor Marine Bird Abundance in Prince William Sound During Winter and Summer: Report and Publication Writing	B. Agler/DOI-FWS	DOI	Cont'd 4th yr. 9 yr. project	\$25.0	\$83.0	\$45.4			\$45.4
<u>Abstract</u> In FY 97, this project would fund report and publication writing. Data collected since 1989 will be used to examine trends by determining whether populations in the oiled zone changed at the same rate as those in the unoiled zone. Overall population trends for Prince William Sound from 1989-96 will also be examined.		<u>Chief Scientist's Draft Recommendation</u> This project is developing a valuable long-term dataset regarding recovery status of injured species, and the statistical power to detect trends in these highly variable datasets should be reached w/1996 data. The costs for this project as described are unacceptable. Four months of funding is recommended in FY97 for PI to prepare 2 peer-reviewed publications on population trends (manuscript #'s 4 and 6 in DPD) that should become part of the final report for the project. The out-year budgets seem excessive, and any future commitments must be considered annually. Fund, but reduce budget accordingly.		<u>Executive Director's Draft Recommendation</u> Fund preparation of a final report (including 1 mo. to conduct regression analysis) and two manuscripts (# 4 and #6 in the proposal) contingent on approval of a revised Detailed Project Description and a reduced budget. The surveys provide basic information on the status and recovery of seabirds (and sea otters) in Prince William Sound and should now be adequate to detect trends in seabird populations. The need for future surveys should be determined after review of the final report.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97163A-P	APEX: Alaska Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska	D. Duffy, et al/UAA	NOAA	Cont'd 2nd yr. 6 yr. project	\$1,750.7	\$2,287.8	\$1,800.0	\$1,800.0	\$1,800.0	\$5,576.4

Abstract

This project will compare the reproductive and foraging biologies, including diet, of seabirds in Prince William Sound with similar measurements from Cook Inlet, an area with apparently a more suitable food environment. These measurements will be compared with hydroacoustic and net samples of fish to calibrate seabird performance with fish distribution and abundance, in an effort to determine the extent to which food limits the recovery of seabirds. Fish will be sampled to determine whether competitive and predatory interactions or different responses to the environment may be favoring the abundance of one fish species over another.

Chief Scientist's Draft Recommendation

The APEX project is an important, innovative project examining the relationship between the availability of forage fish and productivity in marine birds. The study is fundamental to the restoration strategy adopted by the Trustee Council. The PIs are highly qualified and the project has strong leadership. However, the cost of this project is also very high, with several new or increased components proposed for FY 97. These include a major increase to 163B for studying foraging seabirds in relation to downwellings and other local events, which was previously recommended by the reviewers. A project on proximate composition of forage fish, 163H, has been added. Both the expanded 163B and the new 163H need additional review. The text provides no justification for a major increase in the cost of 163C, and the reviewers previously had expressed concern about the value of even continuing this component. There is also question about the continuation of the sand lance oiling component (163P), the necessity of which is questioned by the reviewers. There is a significant modeling component incorporated in 163I, project management. The reviewers encourage the modeling work and recommend that APEX essentially incorporate the proposal by Ainley et al. (97253), although the cost of this component, as proposed, is excessive. Finally, there is a major increase in funding requested for 163M, which may lose funding from alternative sources. Given the need for additional information and review, and uncertainties about supplementary funding for 163M, I can only recommend funding this project at the same level as in FY 96, about \$1.75 million. This amount should include the expanded modeling

Executive Director's Draft Recommendation

Fund at FY 96 level contingent on receipt of the report due on 95163 and approval of a revised Detailed Project Description and budget that incorporate the modeling effort proposed in 97253. In addition, the Chief Scientist will continue to review the proposed expansion of subproject B and the addition of subproject H. If these additions are recommended, they should be funded within the budget ceiling set for this project. (Furthermore, if 97163H is recommended, funding should be contingent on receipt of the final report on 95121.) Consideration should be given to discontinuing subprojects C and P. The APEX project investigates the link between forage fish and seabird productivity. This work may yield results that will benefit the marine ecosystem in Prince William Sound and the northern Gulf of Alaska.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
This amount should include the expanded modeling component (as in 97253).										
97167-BAA	Preparation and Curation of Seabirds Salvaged from the Exxon Valdez Spill	S. Rohwer/University of Washington Burke Museum	DOI	New 1st yr. 1 yr. project		\$41.0	\$32.1	\$0.0	\$0.0	\$32.1
<u>Abstract</u> In 1992 the Burke Museum received emergency funds from NSF to salvage about 1,500 of the most valuable bird carcasses from the Exxon Valdez oil spill. A year later the museum received another NSF grant to support the preparation, curation and storage of these specimens; unfortunately, that funding was not adequate to complete these tasks. This proposal seeks funds to complete the preparation and curation of the remaining birds salvaged from the Exxon Valdez spill for the Burke Museum.q		<u>Chief Scientist's Draft Recommendation</u> This project will establish a biological legacy that could be very valuable to restoration studies that require a sampling of birds killed by EVOS. Potential applications of genetic and other techniques to these samples could uncover additional information about injured bird populations. If there are not enough funds to salvage all of the specimens, as many as possible should be salvaged, giving priority to a combination of carcasses that has the greatest value to the restoration program. Fund at \$30,000.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a reduced budget. This project will complete the preparation, cataloging and labeling of about 400 bird carcasses from the spill. This collection may have value for restoration studies that require a sample of birds that died in the spill.					

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97169-BAA	A Genetic Study to Aid in Restoration of Murres, Guillemots, and Murrelets to the Gulf of Alaska	V. Friesen/Queen's University, J. Piatt/DOI-FWS	DOI	New 1st yr. 4 yr. project		\$153.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Populations of common murres, pigeon guillemots, and marbled and Kittlitz's murrelets from the Gulf of Alaska are failing to recover from the <i>Exxon Valdez</i> oil spill. This project would use state-of-the-art genetic techniques to aid in their restoration by 1) determining the geographic limits and structure of populations, i.e. the extent to which colonies are genetically isolated or comprise metapopulations, 2) detecting cryptic species and subspecies, 3) identifying sources and sinks, 4) providing genetic markers for the identification of breeding populations of birds killed by the spill, 5) identifying appropriate reference or control sites for monitoring or reintroductions, and 6) determining the role of inbreeding and small effective population sizes in restricting recovery.			<u>Chief Scientist's Draft Recommendation</u> The Trustee Council is interested in application of genetic techniques to questions about seabird biology. The review, however, raised significant questions about the objectives being too broad and their relationship to EVOS goals (only some are directly related). In addition, the use of nuclear markers that have not yet been developed rather than the use of microsatellite markers that already exist raises question about the feasibility of the approach (Is there sufficient variability within the former?). Cost for field travel (to obtain specimens) is high and the number of laboratory personnel to accomplish the work is excessive. Do not fund in FY 97. However, a subsequent proposal would be encouraged that is more focused on the EVOS-related objectives and is more cost effective.			<u>Executive Director's Draft Recommendation</u> Do not fund. The Invitation encouraged proposals on the genetics of common murres, marbled murrelets, and pigeon guillemots in order to better understand the relationship between different populations of these species. Although this proposal was responsive to the Invitation, the Chief Scientist expressed significant concerns about the objectives and methodologies of the study.				
97182-BAA	Phenology of Kittlitz's Murrelets in Prince William Sound	R. Burns and L. Prestash/Pelagic Environmental Services	NOAA	New 1st yr. 1 yr. project		\$247.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Kittlitz's murrelets will be captured and radio tagged from June through August, 1997 in Prince William Sound. Radio tracking individual murrelets during the breeding season will identify the relationship between the murrelets' nesting and foraging habitats. Radio tracking after the breeding season will determine murrelet dispersal patterns out of Prince William Sound. Spatial data obtained through radio tracking will be analyzed using GIS.			<u>Chief Scientist's Draft Recommendation</u> The investigators have pioneered work on the capture and radio-tagging of murrelets. As a stand-alone effort, however, this project is not strong. It could be a useful complement to 97142, the core project on Kittlitz's murrelets, but this new work is not a priority at this time. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. Complete Project 142 and develop a restoration strategy for Kittlitz's murrelets before considering new proposals to study this species.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97224	Forage Fish Assessment of the Cook Inlet, Shelikof Strait, and Gulf of Alaska Oil and Gas Development Assessment Areas	V. Elliott/DOI-MMS, A. Bennett/DOI-NPS	DOI	New 1st yr. 3 yr. project		\$110.0	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

This project would provide a means for collecting and collating information on the abundance, density, distribution and stock/population status of forage fishes in the nearshore areas of western Gulf of Alaska, Shelikof Strait and Cook Inlet adjacent to National Park Service areas. Additional inventory and monitoring of forage fish biomass and quality would be done to establish a trend index for ecological change and provide a baseline. Subsequent long-term monitoring could enable the differentiation between natural fluctuations of forage fish biomass and nutrient quality and large or abrupt changes that may occur from local human disturbances, such as oil spills.

Chief Scientist's Draft Recommendation

The purpose and technical approach of this proposal are vague, with no apparent linkage to identified restoration objectives. It is unlikely that this project would provide useful information to the Trustee Council. Do not fund

Executive Director's Draft Recommendation

Do not fund. This project would contribute little to achieving restoration objectives.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97231	Marbled Murrelet Productivity Relative to Forage Fish Availability and Environmental Parameters	K. Kuletz/FWS	DOI	New 1st yr. 4 yr. project		\$217.7	\$0.0			\$0.0
<u>Abstract</u> This project investigates the hypothesis that forage fish abundance is limiting marbled murrelet reproductive success and thus recovery. It compares forage fish abundance, as determined by APEX and SEA studies, to an index of murrelet productivity. Intra- and inter-annual comparisons will be made among six sites in Prince William Sound and between the Sound and Kachemak Bay. Data on terrestrial and marine habitat use will be integrated to make a descriptive model of adult and juvenile murrelet distribution. Historical data will be examined for changes in the present distribution of murrelets indicative of ecosystem-level changes.			<u>Chief Scientist's Draft Recommendation</u> This project investigates the hypothesis that forage fish abundance is limiting marbled murrelet reproductive success and recovery. This work would complement the APEX project and is important in its own right, given the EVOS injury to murrelets. This is a good project from a solid investigator, but I am uncertain whether there is need for a 4-year project. The project is expensive, especially personnel costs, and the budget should be reduced. If funded, fund at a maximum of \$180K.			<u>Executive Director's Draft Recommendation</u> Lower priority for funding. This project would investigate the link between forage fish and marbled murrelet productivity and thereby help explain why the population is not recovering. The proposal is responsive to the Invitation, which encouraged proposals that would integrate marbled murrelet field work with the APEX project. Actual incorporation of this project into the APEX project needs to be explored. If Project 97231 is funded as a separate project, the funding level should not exceed \$180.0 in FY 97, \$180.0 in FY 98, and \$50.0 in FY 99. Funding should be contingent on receipt of the final report on 95031.				
97235	Sand Lance Literature Review and Synthesis	B. Nelson and S. Rice/NOAA	NOAA	New 1st yr. 1 yr. project		\$42.3	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> The SEA, APEX and NVP programs are predicated on understanding how the Prince William Sound ecosystem functions. Sand lance have been identified as an important prey item in the nearshore environment, but these programs have not focused on the abundance and distribution of this species. This proposal would summarize the existing literature on sand lance into a comprehensive review and identify datasets which may contain information on sand lance distribution and abundance in the spill area. An electronic annotated bibliography will be produced.			<u>Chief Scientist's Draft Recommendation</u> This is a reasonably good proposal for documenting the biology of the sand lance in the northern Gulf of Alaska. However, there are several competing proposals that could incorporate a thorough literature review on a more cost effective basis. The TEK component is also addressed elsewhere. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. Project 97306 proposes a more cost effective study of sand lance.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97253-BAA	Factors that Limit Seabird Recovery in the EVOS Study Area: A Modeling Approach	D. Ainley/H.T. Harvey & Associates, R. Ford/Ecological Consulting, Inc.	DOI	New 1st yr. 1 yr. project		\$93.8	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

This project will use models to assess ways in which food supply could be affecting recovery of seabirds in the EVOS study area. Models of foraging effort and success as it relates to breeding productivity will be developed. Results will test the degree to which food limitation is affecting recovery, indicate the mechanisms by which this could come about, and identify the scale at which interactions are occurring between food availability and the colonies being studied by APEX. Moreover, results should help to "aim" the APEX research effort so that sufficient data are collected to fulfill the overriding APEX objective: to understand the ways in which food supply is limiting seabird recovery.

Chief Scientist's Draft Recommendation

This technically sound proposal would augment the APEX program by creating a model to integrate the observations of APEX investigators and develop predictions that can be tested. Investigators are highly qualified, although labor costs are high. The high cost of manager at Harvey & Associates needs justification. This proposal should only go forward as a portion of the APEX program, and at least some funds have already been made available in APEX budget for this purpose. Do not fund as separate project, but fold into APEX (subject to concurrence of APEX leadership and proposers).

Executive Director's Draft Recommendation

Do not fund as a separate project. Incorporate into the APEX project (97163).

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97305	Monitoring Response of Seabirds to Changing Prey Availability Using Stable Isotope Analysis	J. Piatt/DOI-NBS	DOI	New 1st yr. 4 yr. project		\$90.1	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> A key component of the ecosystem-level study (APEX) designed to evaluate the response of seabirds to fluctuations in forage fish density following the <i>Exxon Valdez</i> oil spill is the accurate evaluation of seabird diet through time. Recent advances in the use of naturally occurring stable isotopes of carbon and nitrogen to trace food webs can be applied to seabird communities and this technique will allow trophic dynamics and location of feeding to be traced in association with intra- and inter-seasonal changes in seabird prey. Moreover, the measurement of several tissues of seabirds, including those of their eggs, will be used to establish diet of birds integrated over various time periods.		<u>Chief Scientist's Draft Recommendation</u> Stable isotope measurement of seabird tissues could contribute much to our understanding of declines of seabird populations relative to food sources. However, there are a number of technical issues relating to study design and the need to analyze existing samples in order to more efficiently design a future program. Therefore it is recommended that samples gathered in the APEX program in 1995 and 1996 be initially analyzed under project 170 (Schell). The interpretation of these data will provide a basis for future work in this area. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. Samples gathered in the APEX project can be analyzed under Project 97170 using stable isotope analysis.						
97306	Ecology and Demographics of Pacific Sand Lance in Lower Cook Inlet	J. Piatt/DOI-NBS	DOI	New 1st yr. 3 yr. project		\$27.8	\$32.8	\$30.0	\$20.0	\$82.8
<u>Abstract</u> The purpose of this project is to characterize the basic ecology, distribution and demographics of sand lance in lower Cook Inlet. Recent declines of upper trophic level species in the Gulf of Alaska have been linked to decreasing availability of forage fish. Sandlance is the most important forage fish in most nearshore areas of the northern Gulf. Despite its importance to fish, seabirds, and marine mammals, little is known or published on the basic biology of this key prey species.		<u>Chief Scientist's Draft Recommendation</u> This is a novel and exceptionally useful contribution to understanding of a forage fish species that is very important to injured resources and the marine ecosystem. Relies on a graduate student under good supervision and is very cost effective. Fund. PIs should consider addition of a literature review on sand lance biology to this project and a small budget increase (perhaps \$4-5,000) would be appropriate to accomplish this objective.		<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and slightly increased budget that include a literature review on sand lance biology. This project would study sand lance, an important forage fish in the northern Gulf of Alaska. Sand lance populations have been in decline in recent years and should be studied in order to understand marine ecosystems as they may affect injured seabirds and marine mammals.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Archaeological Resources					\$195.0	\$633.2	\$220.2	\$205.0	\$135.0	\$965.2
97007A	Archaeological Index Site Monitoring	D. Reger/ADNR	ADNR	Cont'd 5th yr. 10 yr. project	\$135.0	\$192.2	\$135.0	\$145.0	\$135.0	\$820.0

Abstract

Monitoring of archaeological sites on public land injured by vandalism and oiling will concentrate on a sample of index sites in the three regions of the spill. Oiled sites will be tested for reintroduced oil. The project will end in FY 99 if monitoring shows no continued injury.

Chief Scientist's Draft Recommendation

Conceptually, this is a good project that continues to address "recovery" at injured archaeological sites. Perhaps the sites on newly-acquired lands should be looked at at least once, but any longer commitment should be assessed after those visits. This project should be funded, but possibly at a reduced level and with reallocations within the budget.

Executive Director's Draft Recommendation

Fund continuation of the existing program at the amount projected in FY 96, with funding contingent on approval of a revised Detailed Project Description and budget. The project provides for monitoring of archaeological sites injured by vandalism and oiling. Defer decision on funding an additional four sites on Kodiak and Shuyak islands newly acquired through the Trustee Council's habitat protection program. This concept may have merit, but a proposal to monitor these four sites should be submitted as a new project and evaluated in the context of a long-term monitoring program on land recently acquired or under consideration for acquisition. The long-term monitoring for these lands should also consider potential volunteer site stewardship programs that may be established in these areas.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97007B	Site Specific Archaeological Restoration	L. Yarborough/USFS	USFS	New 3rd yr. 3 yr. project	\$0.0	\$27.2	\$18.9	\$0.0	\$0.0	\$18.9
<u>Abstract</u> This project would provide funding for an additional phase of the Forest Service's archaeological restoration at sites SEW-440 and SEW-488. The final report on the restoration project having been completed in FY 96, this phase of the project will complete presentation of the results to the professional and general public. The Principal Investigator will prepare two professional papers for publication and one paper for presentation at a conference, and make trips to spill-area communities to present information about the project results.			<u>Chief Scientist's Draft Recommendation</u> This is an on-going and successful project to assess and extract information from archaeological sites. This project deserves continued support. Fund, but at reduced level.			<u>Executive Director's Draft Recommendation</u> Fund contingent on receipt of the final report for 95007B and approval of a reduced budget. This project will disseminate the findings of the excavations of SEW-440 and SEW-488 through peer-reviewed journal articles and presentation at a major professional conference and to community groups. These excavations provided significant insights into early occupants of Prince William Sound.				
97149	Archaeological Site Stewardship	D. Reger/ADNR	ADNR	Cont'd 2nd yr. 3 yr. project	\$60.0	\$95.3	\$66.3	\$60.0	\$0.0	\$126.3
<u>Abstract</u> The archaeological site stewardship program will provide training and coordination for a cadre of volunteers to monitor vandalized sites in the oil spill area beyond the ability of agency monitoring. Volunteer site stewards will protect damaged sites on the Kenai Peninsula, Kachemak Bay, Uganik Bay, Uyak Bay and the Chignik area of the Alaska Peninsula. Further protection will come from increased local awareness of harm from site vandalism.			<u>Chief Scientist's Draft Recommendation</u> Vandalism of archaeological sites was a serious concern in the aftermath of the oil spill. Long-term protection and restoration of injured sites will be most successful if undertaken by local people. This successful project is testing and fostering this approach, and it should be continued. Personnel budget should be scrutinized. Fund at originally proposed level.			<u>Executive Director's Draft Recommendation</u> Fund at the FY 96 level less project management, with funding contingent on approval of a revised budget. This is a pilot project that provide training and coordination for volunteers to monitor vandalized archaeological sites in the oil spill area. This effort is currently beyond the ability of normal agency monitoring. After FY 98, expenses will be assumed either by volunteer stewards or agency budgets.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97277	Archaeological Repository and Cultural Facility in Chenega Bay	C. Totemoff/Chenega Corporation	USFS	New 1st yr. 3 yr. project		\$318.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would fund an archaeological repository in Chenega Bay, Alaska. Additional programming under the project will include stewardship of the facility, preservation and curation of artifacts, and educational/cultural programs. During 1997, the work planned for the period includes site control, architectural and engineering final proposals, and program development (in league with Chugach Heritage Foundation), as well as artifact and site inventorying, cataloging, and collecting. Completion of the operations and maintenance plan is also expected during this phase.			<u>Chief Scientist's Draft Recommendation</u> Although this project would contribute to archaeological restoration objectives with respect to Chenega Bay, there are major long-term issues to be resolved in regard to operation of the facility. This raises both financial and policy questions, which must be addressed by others. Based on this limited proposal and the unresolved long-term issues, I cannot recommend funding at this time.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until after completion of the comprehensive community plan for archaeological restoration (96154). If the Trustee Council subsequently issues an invitation for local heritage preservation projects (see p. 42 of the Invitation), invite submission of a more detailed proposal.				
Subsistence					\$1,226.0	\$6,281.8	\$1,180.9	\$909.0	\$632.0	\$3,546.9
97009D-CLO	Survey of Octopuses in Intertidal Habitats	D. Scheel/Prince William Sound Science Center	USFS	Cont'd 3rd yr. 3 yr. project	\$40.9	\$53.3	\$48.0	\$0.0	\$0.0	\$48.0
<u>Abstract</u> This project addresses concerns that octopus and chiton have been depleted by EVOS and that subsistence uses are impaired. In this proposal, close-out costs are requested for FY97, the third year of the project. The first year (FY95) was to establish the feasibility of working with octopus in the Sound, identify suitable study sites, and evaluate techniques. The second year (FY96) is focusing on the factors in nearshore habitats that are important to octopus, and on the turnover rates of octopus in those habitats.			<u>Chief Scientist's Draft Recommendation</u> This is a good project to analyze and report data on a two-year study of octopus in PWS. It has addressed the concerns of local people about the abundance of octopus and chitons and has identified octopus habitat in PWS. The PI is encouraged to integrate the report and publication efforts. Fund, but recommend reduced budget (e.g., \$45K).			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and budget which (1) include presentation of survey results, through either a plain-language written summary or a community meeting, to residents of participating communities (Chenega Bay, Tatitlek, and Port Graham), and (2) combine the final report and publications. This project provides close-out funds for a two-year survey of octopus designed to address the concern that octopus stocks were depleted by the oil spill and that subsistence use of this resource is impaired.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97052	Community Involvement/Traditional Ecological Knowledge	P. Brown/Chugach Regional Resources Commission	ADFG	Cont'd 3rd yr. 8 yr. project	\$250.0	\$378.8	\$250.0	\$250.0	\$250.0	\$1,500.0
<u>Abstract</u> This project would increase community involvement in the restoration process. Martha Vlasoff's subcontract as the Spill Area-Wide Coordinator would be renewed through a contract with the Chugach Regional Resources Commission (CRRC). Through direct communications with a network of local facilitators, the Spill Area-Wide Coordinator would continue to actively involve local residents in the restoration program, particularly ongoing scientific studies. ADFG would compile the TEK raw data they currently hold and put it into a database using the Whiskers! database as a template.		<u>Chief Scientist's Draft Recommendation</u> This is an important continuing program that makes a contribution to the Trustees' traditional knowledge objective for community involvement. It is not clear, however, that the program has been completely successful. The FY97 proposal contains a possibly overambitious scope of work, with objectives and methods that are sometimes not clear. Lack of concrete deliverables raises questions about ultimate contribution of the project. The structure of the program needs to be strengthened; reconsider funding revised proposal			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and budget. Fund community involvement component at level similar to FY 96, including addition of a community facilitator in Seldovia and additional travel for community facilitators to EVOS workshops. Funding of a computer network should be deferred until the communities and their regional organizations (in particular, Chugach Regional Resources Commission, Chugach Heritage Foundation, Kodiak Area Native Association, and Kodiak Island Borough) come forward with a collaborative plan to establish a network, train communities to use the network, and provide for maintenance and other operational costs of the network. Fund ADF&G contribution to this project through Project 97250/Project Management. Traditional knowledge component will be considered as part of a consolidated TEK project (97352) to be developed over the next several weeks in conjunction with this project. Project 97052 continues a program to facilitate communication and interaction among the Trustee Council, scientists, and residents of communities impacted by the oil spill.					

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97127	Tatitlek Coho Salmon Release	G. Kompkoff/Tatitlek IRA Council	ADFG	Cont'd 3rd yr. 4 yr. project	\$15.9	\$12.0	\$11.1	\$12.0	\$12.0	\$35.1
<u>Abstract</u> This project will create a coho salmon return to Boulder Bay near Tatitlek village. Enough coho eggs to produce 50,000 smolt will be collected from an ADFG approved stream, incubated and reared to smolt at the Solomon Gulch Hatchery, transported, and held for two weeks in net pens in Boulder Bay before release. Release will produce a 2,000 to 3,000 adult return to Boulder Bay for harvest in a subsistence fishery.			<u>Chief Scientist's Draft Recommendation</u> This is a good replacement resource project. Fund.			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised budget. Fund through FY 99 (one coho life cycle). Project will create a coho salmon run near Tatitlek as a replacement resource for subsistence resources injured by the oil spill.				
97131	Chugach Native Region Clam Restoration	D. Daisy/Chugach Regional Resources Commission	ADFG	Cont'd 3rd yr. 5 yr. project	\$413.6	\$401.4	\$310.0	\$275.0	\$275.0	\$860.0
<u>Abstract</u> Project objective is to establish safe, easily accessible subsistence clam populations near Native villages in the oil spill region. The Qutekcak hatchery in Seward will annually provide about 800,000 juvenile littleneck clams and cockles. Historical information, local and agency expertise, and research will be used to identify areas to seed and what method to use. Total seeded area during project will not exceed 5 hectares. Development work will be confined to areas near the Native villages of Eyak, Tatitlek, Nanwalek, and Port Graham. Other Native villages in the oil spill region interested in becoming part of the project will have preliminary beach survey work done.			<u>Chief Scientist's Draft Recommendation</u> FY 1997 is the third year of a 5-year project. The proposers have shown that they can spawn and grow little-neck clams in a nursery environment. However, there are still substantial concerns about the grow-out phase of the project. These and other concerns have not been addressed by the proposers. The cost of this project is very high, including such items as 12 months time for an Inhouse aquaculture expert (an outside expert, for a limited time, was recommended). Fund contingent upon submission of revised DPD that fully addresses previous peer review comments. On a one-time basis, add 6 months of an ADF&G employee's time to start operations of the new facility in relation to the clam project			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of (1) revised Detailed Project Description that addresses technical concerns raised by Chief Scientist and (2) reduced budget. Include funds for approximately 6 months of an ADF&G mariculture technician as a 1-time only contribution of the Trustee Council toward operation of the state's Mariculture Technical Center to ensure that the services of the MTC are available to the Council's clam restoration effort (see Project 97171). Project is intended to establish subsistence clam populations as replacement for subsistence resources injured by the oil spill.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97156	EVOS Restoration Public Access & Education Program	H. Tomingas/Ocean Explorers	ADFG	New 1st yr. 6 yr. project		\$267.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Project will provide funds for traditional knowledge holders, educators, coastal community representatives, and the like to be aboard research vessels contracted for use on EVOS projects.		<u>Chief Scientist's Draft Recommendation</u> Not possible to determine if this project is feasible or will contribute to recovery objectives. High costs are not justified, and no presentation of the proposer's TEK qualifications or experience is made. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. In general, this project would pay for community members to be transported to and stay aboard research vessels under contract to EVOS projects. Such participation of spill-area residents in ongoing research projects should be coordinated with individual EVOS principal investigators and the Community Involvement Coordinator (Project /052), and funds for this purpose should be included in individual project budgets or the TEK project (97352) currently under development.						
97210	Youth Area Watch	R. Sampson/Chugach School District	ADFG	Cont'd 2nd yr. 7 yr. project	\$100.0	\$203.4	\$120.0	\$120.0	\$0.0	\$240.0
<u>Abstract</u> This project links students within the oil spill impacted area with research and monitoring projects funded through the Trustee Council. The goal is to involve students in the restoration process and give them the skills to participate in restoration activities now and in the years to come. Youth conduct activities identified by principal investigators who have indicated interest in working with students.		<u>Chief Scientist's Draft Recommendation</u> This is a conceptually strong proposal that is well coordinated with other components of the restoration program. The proposal is not well-written, with vague technical methods, but past experience suggests the project is feasible. Cost seem excessive, and not consistent with the plan for tightly coordinating operations with other projects. Reconsider scaled-down program with less administrative labor.		<u>Executive Director's Draft Recommendation</u> Fund second year of this pilot project with a modest increase in funding over FY 96 to allow participation of a few more students and to provide funds for two participating students to attend the EVOS Annual Restoration Workshop. Funding is contingent on approval of a revised Detailed Project Description and budget which reflect this modest increase. Additional expansion will be considered for FY 98, following a review of the pilot project's implementation. After FY 98, expenses will be assumed either by the participating school districts or Chugachmiut. This project is designed to involve local youth in ongoing restoration projects.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97214-CLO	Documentary on Subsistence Harbor Seal Hunting in Prince William Sound	B. Simeone/ADFG	ADFG	Cont'd 2nd yr. 2 yr. project	\$0.0	\$12.1	\$5.4	\$0.0	\$0.0	\$5.4
<u>Abstract</u> This is a close-out of a project begun in FY 96. The video will document all facets of harbor seal hunting, including the ecological and biological knowledge hunters use to hunt seals. In FY 96, Taylor Productions of Anchorage was awarded the contract to produce the documentary, which will be completed by February 1997. Funds requested for FY 97 will supplement a subcontract with Tatitlek to support village participation in the project and one month of ADFG staff time to assist with review of the project and final report completion. Funds will also support participation by Tatitlek residents in a public screening of the completed documentary in Anchorage.			<u>Chief Scientist's Draft Recommendation</u> These funds are for close-out of a project to document subsistence use of harbor seals. This promises to be a very successful video that will have great educational value. It will be popular among the rural residents of Alaska, and will contribute to the restoration of subsistence services. With these additional funds, the principal investigators should make sure that the video receives extensive distribution.			<u>Executive Director's Draft Recommendation</u> Fund portion of project that would supplement subcontract with Tatitlek. Fund ADF&G contribution this project through Project 97250/Project Management. Funding is contingent on approval of a revised Detailed Project Description which outlines to whom and how the video will be distributed, and a revised budget. This project is designed to contribute to the restoration of harbor seals and subsistence uses by transmitting local knowledge and observations about harbor seals to the scientific community.				
97220	Eastern PWS Wildstock Salmon Habitat Restoration	D. Schmid/USFS	USFS	Cont'd 2nd yr. 4 yr. project	\$115.0	\$118.0	\$92.0	\$92.0	\$20.0	\$204.0
<u>Abstract</u> This project will replace lost subsistence services resulting from the Exxon Valdez oil spill by increasing wild salmon production in eastern Prince William Sound. Instream fisheries habitat improvement techniques, primarily the installation of log structures, will be employed by local subsistence users to increase the capability of selected streams to produce additional salmon. The project is being developed and implemented cooperatively by the Native Village of Eyak, the Native Village of Tatitlek, and the USFS.			<u>Chief Scientist's Draft Recommendation</u> This is a continuation of an ongoing project to provide replacement subsistence fish resources. Fund.			<u>Executive Director's Draft Recommendation</u> Fund at FY 96 level (Eyak area streams only). Defer decision on expanding project to include streams in the Tatitlek area until after the FY 96 field season is complete. This project is designed to replace subsistence services lost due to the oil spill by increasing wild salmon production in Prince William Sound.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97222	Chenega Bay Salmon Habitat Enhancement (Stream 667 Fish Pass)	USFS	USFS	Cont'd 2nd yr. 3 yr. project	\$56.4	\$78.8	\$0.0		\$0.0	\$0.0
<u>Abstract</u> This project seeks to help the recovery of subsistence in Chenega Bay by installing a fish pass in Stream 667 (known both as Anderson Creek and O'Brien Creek). This creek flows through the community of Chenega Bay but is inaccessible to salmon because of a waterfall just above the upper intertidal zone. Installation of a fish pass at the waterfall would allow chum and coho salmon access to spawning and rearing habitats in the creek and would increase the number of salmon available for subsistence use.			<u>Chief Scientist's Draft Recommendation</u> Defer funding until there is an opportunity to see the 1996 results.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until results of feasibility study and environmental analysis funded in FY 96 are available (expected August 1996 and October 1996, respectively). Project would replace subsistence services lost due to the oil spill by opening up additional spawning and rearing habitat for chum and coho salmon on Stream 667 (also known as Anderson Creek) near the village of Chenega Bay.				
97225	Port Graham Pink Salmon Subsistence Project	E. Anahonak, Port Graham IRA Council	ADFG	Cont'd 2nd yr. 5 yr. project	\$83.1	\$80.4	\$74.4	\$75.0	\$75.0	\$299.4
<u>Abstract</u> This project will provide pink salmon for subsistence use in the Port Graham area while maintaining the Port Graham hatchery's broodstock development schedule. Because local runs of coho and sockeye salmon, the more traditional salmon subsistence resource, are at low levels, pink salmon are being heavily relied on for subsistence. The project will supplement ADFG monitoring of the Port Graham hatchery's pink salmon return, and will enhance the juvenile-to-adult survival of hatchery-produced pink salmon through an extended rearing program.			<u>Chief Scientist's Draft Recommendation</u> This proposal will generate replacement pink salmon subsistence resources. This version is much improved over the previous proposal (FY96), as close attention to the reviewer's comments has produced a well-thought out proposal with very good probability of success. Fund			<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a reduced budget. Project is intended to increase the availability of pink salmon for subsistence use, replacing runs of coho and sockeye salmon depleted since the oil spill.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97244	Community-Based Harbor Seal Management and Biological Sampling	M. Reidel/Alaska Native Harbor Seal Commission	ADFG	Cont'd 2nd yr. 3 yr. project	\$100.0	\$155.7	\$100.0	\$85.0	\$0.0	\$185.0

Abstract

This project will expand the biological sample collection program funded by the Trustee Council in FY 96 in Prince William Sound and lower Cook Inlet to two Kodiak Island and two Alaska Peninsula communities. Village-based technicians will be selected by the Alaska Native Harbor Seal Commission (ANHSC) and trained to collect samples and transport the samples for analysis. The traditional knowledge database distributed in FY 96 will be updated and produced on CD-ROM. Maps depicting harbor seal subsistence harvest areas will be prepared. The ANHSC will organize a workshop and produce and distribute a newsletter.

Chief Scientist's Draft Recommendation

The technical approach for this project is very clear; it seems feasible, and makes excellent use of local residents talents that have been historically underutilized. Good collaboration with Youth Area Watch project (96210). Proposers need to follow through on plan to find funding other than EVOS. Management costs seem high; harbor seal commission's TEK time could be reduced without adverse impact on the proposal. Fund after submission of revised proposal.

Executive Director's Draft Recommendation

Fund continuation of the existing program at the amount projected in FY 96, with funding contingent on approval of a revised Detailed Project Description and budget. If successful, this pilot project will serve as a prototype for a long-term sampling program that will involve Native hunters in the management of harbor seals. In the near term, this project will enable Native hunters to provide harbor seal samples for 97001, 97064, and 97170, which seek to explain why harbor seals are not recovering. Reconsider the proposed expansion of the sampling program in FY 98 after an assessment of the effectiveness of the sampling program and the recovery status of harbor seals and continuing research needs. Evaluate the proposed upgrade of the "Whiskers!" database in the context of 97352, a new project that will address comprehensively the use of traditional ecological knowledge in restoration program.

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97245-BAA	Community-Based Harbor Seal Research	M. Reidel/Alaska Native Harbor Seal Commission	ADFG	New 1st yr. 4 yr. project		\$274.3	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project aids restoration of harbor seals and subsistence by developing fundamental data sets needed to (1) evaluate factors affecting the harbor seal decline and (2) strengthen monitoring of subsistence takes. This project involves the knowledge and expertise of subsistence users and other community members to survey seasonal changes in harbor seal distribution during the fall-winter-spring, develop detailed annotated harbor seal distribution maps, and work with the Community Involvement project to record observations of local marine occurrences and summarize observations in regional newsletters.		<u>Chief Scientist's Draft Recommendation</u> This project addresses significant community concerns about what is happening to harbor seal population in spill area. It proposes to train and use local residents in surveying harbors seals, particularly in the winter months. The level of experience of the investigators is good, and the proposed collaboration with local residents is desirable. However, this proposal does not address the extensive existing database and how these data would be utilized. It is not explicitly stated how the results of this project will augment our understanding of seal declines or aid in their recovery. Do not fund, but consider revision in FY98 after overall assessment of harbor seal program.		<u>Executive Director's Draft Recommendation</u> Do not fund in FY 97. Reconsider this proposal in FY 98 after the assessment of the recovery status of harbor seals and continuing research needs.						
97247	Kametlook River Coho Salmon Subsistence Project	J. McCullough & L. Scarborough/ADFG	ADFG	New 1st yr. 7 yr. project		\$46.2	\$0.0			\$0.0
<u>Abstract</u> This project is a continuation of a project funded in 1996 through the EVOS criminal settlement. The first year of the project is an assessment of what method would be best suited to restore the Kametlook River's coho runs to historic levels. This project would provide funding through FY 2002 for ADFG to try conservative and safe enhancement methods. Instream incubation boxes and habitat improvements for spawning and rearing habitat will be evaluated.		<u>Chief Scientist's Draft Recommendation</u> This proposal does not have a proper technical foundation in relation to EVOS supplementation policy and ADF&G genetics policy and needs additional planning.		<u>Executive Director's Draft Recommendation</u> Defer decision on funding until evaluation phase of project, which was funded with grant funds from the state's criminal settlement with Exxon Corporation, is complete. Future funding of implementation phase of project would be contingent on approval of (1) a revised Detailed Project Description that addresses technical concerns raised by the Chief Scientist and (2) a reduced budget (\$18.9 had been requested from the criminal fund for the first year of project implementation). This project is designed to enhance a coho salmon run near Perryville as a replacement resource for subsistence resources injured by the oil spill.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97256A	Sockeye Salmon Stocking at Columbia Lake	K. Murphy/USFS	USFS	Cont'd 2nd yr. 7 yr. project		\$34.4	\$0.0			\$0.0
<u>Abstract</u> This project is designed to benefit subsistence users of northern PWS by stocking sockeye salmon in Columbia Lake. The lake is a predominantly clearwater lake that has recently become accessible to anadromous fish as Columbia Glacier has retreated. There are two phases to this project. The feasibility phase of the project (FY 96) and FY 97) will determine the ability of Columbia Lake to support a resident population of sockeye salmon. Phase 2 of the project would be to stock the lake with sockeye salmon. If the project is found to be feasible, stocking of the lake could begin in 1999. The stocking program would take five years to establish a self-sustaining run.			<u>Chief Scientist's Draft Recommendation</u> This project is relatively inexpensive, although potentially substantial out-year costs are not identified. If habitat is suitable, sockeye will colonize the lakes anyway. Defer until review of the feasibility report from 96256A.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until feasibility work funded in FY 96 (the ability of the lake to support a sockeye salmon population) is evaluated and out-year costs are identified. Feasibility report expected November 1996. If feasible, this project could provide sockeye salmon as a replacement for subsistence and sport fishing resources injured by the oil, particularly for the residents of Tatitlek and Valdez.				
97256B	Sockeye Salmon Stocking at Solf Lake	K. Murphy/USFS	USFS	Cont'd 2nd yr. 7 yr. project		\$16.8	\$0.0			\$0.0
<u>Abstract</u> This project is designed to benefit subsistence users of PWS and especially residents of Chenega Bay. Habitat improvements were made in 1978, 1980 and 1981 to provide access to Solf Lake for anadromous fish. Investigations suggest that the lake is fishless and has adequate zooplankton biomass to support a salmon population. There are two phases to this project. The feasibility phase (FY 96) will verify the ability of Solf Lake to support a population of sockeye salmon. Phase 2 would stock the lake with sockeye salmon and ensure adequate anadromous access to the lake. If the project is found to be feasible, stocking of the lake could begin in 1998.			<u>Chief Scientist's Draft Recommendation</u> Defer until review of the feasibility report from 96256B.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until feasibility work funded in FY 96 (the ability of the lake to support a sockeye salmon population and what type of habitat improvements might be necessary to ensure salmon have access to the lake) is evaluated and out-year costs are identified. Feasibility report expected November 1996. If feasible, this project could provide sockeye salmon as a replacement for subsistence and sport fishing resources injured by the oil spill, particularly for the residents of Chenega Bay.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97261	Port Graham Landowners Resource Ethic and Stewardship Subsistence Enhancement	W. Meganack, Jr./Port Graham Village Council	ADFG	New 1st yr. 3 yr. project		\$443.6	\$0.0	\$0.0	\$0.0	\$0.0
	<u>Abstract</u> The Port Graham Village Council will serve as a leader to develop a cooperative land ethic and resource stewardship plan for the 36 parcels of private land (native allotments) and village council lands that total 5,300 acres Seldovia Native Association, State, and Port Graham Corporation lands and the land within the port Graham village itself. This plan will be designed to protect and enhance the subsistence resources that will substitute for the subsistence resources lost and damaged due t the Exxon Valdez oil spill.	<u>Chief Scientist's Draft Recommendation</u> This proposal puts forth an important idea that has the potential to make a positive contribution to subsistence resources. However, the proposal is vague with few concrete or measurable objectives and an inadequate presentation of methods. In addition, the proposal has not made an adequate link to restoration program objectives, and lacks adequate justification for proposed costs. Do not fund.	<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified.							
97262	Shoreline Inventory, and Protection and Enhancement of Shorelines on PGC Lands	W. Meganack, Jr./Port Graham Corporation	ADFG	New 1st yr. 3 yr. project		\$595.7	\$0.0	\$0.0	\$0.0	\$0.0
	<u>Abstract</u> This project would inventory and assess all shorelines on Port Graham Corporation lands (210 miles) on the coastline from the Ailalik Peninsula to the Port Graham drainage in Kachemak Bay. The project would assess damaged shoreline habitat, study methods of enhancement and recovery of damaged populations, determine protection needs, determine productivity and value, and prepare special land use plans for protection and enhancement and increasing subsistence resources for Port Graham residents. The study area would be on Port Graham Corporation lands which total 112,000 acres, all of which have important shorelines.	<u>Chief Scientist's Draft Recommendation</u> This project proposes to inventory and assess biological resources and classify shorelines in the Port Graham area. While this is an excellent idea that will support the efficient and intelligent use of resources, the proposal lacks sufficient detail to determine if objectives can be achieved. The proposal is vague, particularly with reference to use of existing data and how protection and enhancement recommendations will be developed. High costs are poorly justified. Do not fund.	<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified.							

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97263	Assessment, Protection and Enhancement of Salmon Streams on Port Graham Corporation Lands	W. Meganack, Jr./Port Graham Corporation	ADFG	New 1st yr. 3 yr. project		\$1,404.6	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Port Graham Corporation will conduct an inventory and assessment of the approximately 25-30 salmon streams on their 112,000 acres of land. Protection and enhancement projects will be proposed. Streams will be classified as Class I, II, and III and fish populations and potential populations will be inventoried. Port Graham residents and corporate shareholders will conduct the survey.		<u>Chief Scientist's Draft Recommendation</u> While this project might contribute to the efficient and intelligent use of resources, the proposal lacks sufficient detail to determine if objectives can be achieved. The proposal is vague, particularly with reference to use of existing data, survey methods, and how protection and enhancement recommendations will be developed. There is no indication that proposers have the experience or qualification to do the work, and high costs are poorly justified. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified. However, the concept of protecting and enhancing salmon streams may have value for restoration. The Restoration Office has identified which of the Port Graham Corporation lands have value for restoration and are negotiating for the protection of those lands. A proposal that targets specific streams of high value for restoration purposes would be welcome in FY 98 depending on the outcome of habitat protection negotiations.						
97264	Inventory, Assessment, Protection & Enhancement of Wetlands & Riparian Areas on PGC Lands	W. Meganack, Jr./Port Graham Corporation	ADFG	New 1st yr. 3 yr. project		\$417.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would inventory all wetlands on Port Graham Corporation lands on the Allak Peninsula to the Port Graham drainage in Kachemak Bay, assess wetland riparian habitat, and study methods of enhancement and recovery of wetland riparian areas. The study area will be on Port Graham Corporation lands which total 112,000 acres, all of which have important wetlands and lakes.		<u>Chief Scientist's Draft Recommendation</u> While this proposal might contribute to the efficient and intelligent use of resources, the proposal lacks sufficient detail to determine if objectives can be achieved. The proposal is vague, particularly with reference to use of existing data, survey methods, and how protection and enhancement recommendations will be developed. There is no indication that proposers have the experience or qualification to do the work, and high costs are poorly justified. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97265	Subsistence Enhancement on Port Graham Corporation Uplands: Planting of Willows for Moose Browse	W. Meganack, Jr./Port Graham Corporation	ADFG	New 1st yr. 3 yr. project		\$334.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would inventory all moose habitat on Port Graham Corporation lands in the Rocky and Windy rivers to the Port Graham drainage in Kachemak Bay. The planting of specific willow species will increase the moose browse on the fall-winter and spring range of the moose. Plantings will be along the existing logging road system, which totals over 100 miles. The enhancement of moose habitat will increase the moose population for subsistence users, and will allow Port Graham residents to substitute this resource for the lost and damaged marine subsistence resources caused by the Exxon Valdez oil spill.		<u>Chief Scientist's Draft Recommendation</u> No cogent argument is presented that the project will actually increase subsistence resources, and the potential ecological implications of the planting program not considered. The lack of detail in the proposal makes it impossible to judge feasibility. The link to restoration objectives is poor, and the high cost of the program is poorly justified. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified. The objective of replacing subsistence resources lost or diminished because of the spill is an important one. However, two continuing projects seem to be more effective than the proposed project in replacing subsistence resources identified as important for Port Graham. The objective of 97131 is to supply a safe, easily accessible source of clams for subsistence use near Port Graham and the objective of 97225 is to ensure that pink salmon is available for subsistence use until coho and sockeye salmon runs are rejuvenated.						
97267	Port Graham Floating Skiff Dock for Subsistence Harvesters	W. Meganack, Jr./Port Graham Village Council	ADFG	New 1st yr. 1 yr. project		\$62.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would provide funding for a floating skiff dock for use by the residents of Port Graham to store skiffs used for subsistence activities. At present, skiffs must be stored on land, often far from the water. This makes it difficult for residents to take advantage of good harvesting weather. This further limits subsistence use, which was injured by the Exxon Valdez oil spill. Storing skiffs on the water, where they are ready for use, would allow subsistence users to make better use of harvesting opportunities. This would partially mitigate the local impacts of the spill on subsistence resources and uses.		<u>Chief Scientist's Draft Recommendation</u> This proposal would allow more efficient use of skiffs, allowing access to replacement subsistence resources further from the village of Port Graham. This is consistent with restoration objectives, and proposers appear to be well qualified to complete the project. It also appears to be cost-effective. Fund.		<u>Executive Director's Draft Recommendation</u> Defer decision on funding until this project's legal permissibility is reviewed. Providing a skiff dock in Port Graham Bay is intended to allow more efficient use of skiffs, thereby improving residents' access to replacement subsistence resources farther from the village and reducing the harvest pressure on injured subsistence resources near the village, such as clams.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97268	Funding for Educational Harvest Trips: Port Graham	W. Meganack, Jr./Port Graham Village Council	ADFG	New 1st yr. 3 yr. project		\$22.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Since the oil spill, there is a scarcity of some key resources close to Port Graham. Subsistence users have been forced to travel further to harvest sufficient resources. Because such trips are expensive, participation in these trips has been limited to the most experienced and productive harvesters. Youths have had less of a chance to participate and gain experience than was the case before the oil spill. This project would provide funding for additional trips, which would reduce the pressure to harvest as much as possible on each trip and provide for the inclusion of youths on harvesting trips.			<u>Chief Scientist's Draft Recommendation</u> This has merit, but the technical approach lacks sufficient detail to evaluate. Some budgeted expenses seem unnecessary, and more in-kind contributions appear warranted. Defer until revised proposal is resubmitted.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until this project's legal permissibility is reviewed. The project is intended to increase access by residents of Port Graham to alternate subsistence resources as a replacement for resources injured by the oil spill.				
97271	Status of Subsistence Marine Mammals in the Lower Cook Inlet/Kachemak Bay Region	F. Elvsas/Seldovia Village Tribe	ADFG	New 1st yr. 3 yr. project		\$116.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project is directed toward marine mammals in the Lower Cook Inlet/Kachemak Bay region of Alaska - specifically sea otter, Steller sea lions and harbor seals. While there have been several studies conducted since the <i>Exxon Valdez</i> oil spill attempting to document its environmental impact, there have been few reliable studies conducted in the Seldovia area. Under this proposal, Seldovia Village Tribe, in association with Nanwalek and Port Graham communities, will conduct a comprehensive population study of marine mammals in their region with the view to managing the resource on a sustainable basis.			<u>Chief Scientist's Draft Recommendation</u> This proposal has the potential to develop a good community-based program, and follows a model that has been used successfully in many regions of the US and Canada to develop natural resource management programs by cooperation between scientists and local communities. Inadequate support is provided, however, for the hypothesis that sea otter populations are declining in the region, which makes the project's relationship to restoration objectives questionable. The technical approach for the surveys is not well developed. The Trustee Council is already funding harbor seal harvest monitoring, bio-sampling, and community involvement with 96052. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. The Chief Scientist has raised significant technical concerns about the objectives and methodology of this project.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97272-CLO	Chenega Chinook Release Program	J. Milton/Prince William Sound Aquaculture Corporation	ADFG	Cont'd 4th yr. 5 yr. project	\$51.1	\$45.0	\$45.0	\$0.0	\$0.0	\$45.0
<u>Abstract</u> Chinook salmon incubated and reared at the Wally Noerenberg Hatchery will be released in Crab Bay, adjacent to the Native community of Chenega. Adult salmon returning to the site of release will provide replacement resources and associated services injured by the oil spill. Two releases have taken place (1994, 1995) as part of this multi-year project. Adult salmon will begin returning in 1996 and 1997, with larger numbers projected at nearly 1,000 adult fish returning in 1998 and thereafter.			<u>Chief Scientist's Draft Recommendation</u> This is a continuing project with a sound technical approach. The annual report looked good, and the program is likely to produce 1-2,000 adult fish through 2002 as replacement subsistence resources for the village of Chenega. Fund.			<u>Executive Director's Draft Recommendation</u> Fund final year of Trustee Council contribution. Project is designed to provide replacement resources for subsistence salmon injured by the oil spill.				
97276	Access Road to Donor Bay as Replacement for Chignik Lagoon Subsistence Clam Harvest	J. Lind/Chignik Lake Village Council	ADFG	New			\$0.0			\$0.0
<u>Abstract</u> This project would construct a road from the Chignik villages to Donor Bay for subsistence use. Subsistence clamming in the Chignik Lagoon area is no longer possible because of recent incidents of shellfish poisoning. This proposal came in the form of a resolution from the Chignik Lake Village Council. A cost estimate has not been provided.			<u>Chief Scientist's Draft Recommendation</u> This proposal would upgrade a rough access track to subsistence resources (clams) at Donor Bay, which is on the Alaska Peninsula. The residents had previously had dug clams at Chignik Lagoon, but the clams there have made people sick, and the residents believe that there is a linkage to the oil spill. If it is appropriate to provide increased access to subsistence resources, it may be appropriate to support this proposal. However, there would need to be a more detailed proposal and budget. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. This proposal is for construction of a 15-mile road in place of an existing rough track. The intent of the proposal is to provide residents of Chignik Lake easier access to subsistence resources at Donor Bay. However, the proposal is of a scale and magnitude that calls into question its link to restoration of injured resources.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97281	Habitat Improvement Through Redesigned Forest Workshops	R. Ott/Native Village of Eyak Tribal Council	USFS	New 1st yr. 1 yr. project		\$115.8	\$50.0	\$0.0	\$0.0	\$50.0
<u>Abstract</u> This project will promote habitat improvement by providing Alaska Natives and community leaders with tools for self determination of culturally appropriate economic development of forested lands. These tools will be provided through a series of facilitated workshops that will reexamine all possible land use options in light of the effects of logging on the ecosystem. Cultural needs of the traditional and customary users of the natural resources associated with those lands will be prioritized at the same time as recognizing the priority for maintaining a strong economic base for the land owners. These land use options will provide a much more cost effective way to provide habitat improvement than outright acquisition. <u>Chief Scientist's Draft Recommendation</u> While reforestation and sustained uses of forests have a link to habitat protection as a restoration objective, this proposal gives little detail as a basis for technical evaluation. There also are policy questions about whether the Trustee Council should get involved in this type of effort. To be successful, any work along the lines of what is proposed would need full support and participation of the Eyak Village Corporation and the Chugach Native Corporation, which are the land owners/managers. Based on the merits of the proposal as presented, the reviewers cannot recommend funding. <u>Executive Director's Draft Recommendation</u> Contribute partial funding to this project contingent on joint sponsorship by key stakeholders (e.g., Chugach Alaska Corporation, the village corporations, and other village councils) and approval of a more Detailed Project Description and revised budget. The project consists of a 3-day conference in Cordova, followed by two workshops. These sessions would bring together people from all villages in the spill area, except Kodiak, to develop a vision for the future development of private land and communities in the spill area. The results of the workshop may increase protection of habitat for resources and services injured by the spill and complement the Trustee Council's land acquisition efforts.										
97282	Sea Otter Population Monitoring	Native Village of Eyak	DOI	New 1st yr. 5 yr. project		\$287.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would involve Alaska Natives in monitoring the sea otter population in Prince William Sound. While sea otters appear to be recovering region-wide, during the past two years the sea otter population in the Cordova area has experienced reduced population viability. Native hunters believe the problem is due to reduced resource availability. Local monitoring of population distribution and abundance would be accomplished through boat surveys. In addition, hunters are organizing a local permitting system to monitor harvests. <u>Chief Scientist's Draft Recommendation</u> This proposal is an attempt to deal with an apparent sea otter population management problem near the city of Cordova. The problem is real, however, it is unrelated to the EVOS restoration program. It is outside the oiled area (but directly oiled). Further, the technical design of the surveys is weak. Do not fund. <u>Executive Director's Draft Recommendation</u> Do not fund. The sea otter population proposed for study is outside of the area that was directly oiled. In addition, its decline appears to be related to the inability of prey populations to sustain such a large number of sea otters. However, the project proposer and the researchers conducting sea otter surveys under Project /025 should explore ways of involving local sea otter hunters in the Trustee Council's ongoing sea otter monitoring/research efforts.										

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97286	Elders/Youth Conference on Subsistence and the Oil Spill	B. Henrichs/Native Village of Eyak	DOI	New 1st yr. 1 yr. project		\$131.7	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Building on the recommendations from the Community Conference on Subsistence and the Oil Spill, this project proposes to bring together elders and youth from all of the oil spill-affected communities to focus on the positive outcomes of the first conference's action items. This conference will be held in Cordova and will be linked to a healing conference (Sobriety Day Celebration and Memorial Potlatch) sponsored by the Native Village of Eyak that will directly follow the Elder's Conference.		<u>Chief Scientist's Draft Recommendation</u> The Trustee Council has sponsored previous conferences on subsistence and the oil spill, and is continuing to implement community interactions through 052 and other projects. It is not clear that this new project would accomplish much substantial that is not already within the scope of 052 and other projects. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund this year; reconsider for funding in FY 98. Proposal would fund a conference, to be held in December 1996, similar to the Community Conference on Subsistence and the Oil Spill sponsored by the Trustee Council in October 1995. Postponing the conference an additional year will allow more time for the strategies adopted at the 1995 conference to be implemented.						
97295	Dissemination of Traditional Knowledge	D. Mortenson/ADNR	ADNR	New 1st yr. 1 yr. project		\$172.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would work with the Community Involvement Project (/052) to provide technical training, software, and information to enable local communities to collect and present local and traditional ecological knowledge in a geographic information system. The project would provide tools useful for increased communication and exchange of information between local residents, the scientific community, and the Trustee Council.		<u>Chief Scientist's Draft Recommendation</u> This is a very creative idea to put GIS information within the reach of local residents. This proposal is unproven, however, and it is proposed on a scale that seems unrealistic and unwarranted. If this proposal were submitted on a limited pilot basis, it may be appropriate to consider a revised proposal. However, as written, I cannot recommend funding.		<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. Establishment of a computer network to facilitate communication among residents of communities impacted by the oil spill, scientists, and the Trustee Council is also proposed under Project 97052/Community Involvement. Funding of a computer network should be deferred until the communities and their regional organizations (in particular, Chugach Regional Resources Commission, Chugach Heritage Foundation, Kodiak Area Native Association, and Kodiak Island Borough) come forward with a collaborative plan to establish a network, train communities to use the network, and provide for maintenance and other operational costs of the network. Component of Project 97295 that would collect traditional knowledge will be considered as part of a consolidated TEK project (97352) to be developed over the next several weeks.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97352	Traditional Ecological Knowledge: A Consolidated Approach			New			\$75.0			\$75.0

Abstract

Chief Scientist's Draft Recommendation

Executive Director's Draft Recommendation

Over the next several weeks, proposers of projects involving Traditional Ecological Knowledge, as well as agency representatives and other interested parties, will be invited to work with Trustee Council staff to develop a consolidated TEK proposal for funding in FY 97.

Reduction of Marine Pollution					\$3,233.1	\$1,435.4	\$75.0	\$0.0	\$1,510.4
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97115	Implementation of the Sound Waste Management Plan: Environmental Operations and Used Oil Management System	P. Roetman/Prince William Sound Economic Development Council	ADEC	New 3rd yr. 4 yr. project	\$1,167.9	\$1,167.9	\$75.0	\$0.0	\$1,242.9
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Abstract

This project will help prevent marine pollution that is generated from land-based sources within the five Prince William Sound communities. The Sound Waste Management Plan was developed to address community-based sources of marine pollution. This project will provide a portion of the funding needed to implement two of the five recommendations contained in the plan: 1) construction of Environmental Operation Stations to improve the overall management of solid and oily wastes; and 2) creation of a comprehensive used oil management system in each community. The communities will provide substantial funding to help implement the recommendations.

Chief Scientist's Draft Recommendation

This is a logical and effective proposal to implement the planning work on management of chronic wastes that affect the marine ecosystem and injured species. The communities involved have done an outstanding job, and they propose to contribute significant in-kind resources to this project. Further justification of costs and more specifics that link personnel to identified objectives before funding should be approved. Fund after further review of budget.

Executive Director's Draft Recommendation

Fund contingent on further budget review. This project will decrease pollution entering Prince William Sound by providing a sheltered space and equipment necessary to safely collect and store used oil, household hazardous wastes and recyclable solid wastes in Valdez, Cordova, Tatitlek, Chenega and Whittier. Environmental Operations Stations ("EVOS" stations) will be modular structures erected in convenient locations in each community to encourage residents and visitors to properly dispose of wastes. By reducing chronic pollution, this project will reduce stress on recovering resources and services.

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97229	City of Cordova - Solid Waste Disposal Site	S. Janke/City of Cordova	ADEC	New 1st yr. 1 yr. project		\$918.3	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project will prevent wastes generated in the city of Cordova from entering Prince William Sound. This project will provide funding needed by Cordova to realize one of its primary waste management goals (as articulated in the recently completed Sound Waste Management Plan): determine how and where the community's municipal solid waste will be disposed of over the long term. Based on the Sound Waste Management Plan's findings, and in consultation with resident experts, Cordova leaders determined that the community's most cost-effective and responsible solid waste disposal option is to develop a new landfill site at 17 Mile of the Copper River Highway. The proposed project covers capital costs for the first year of that public works venture.			<u>Chief Scientist's Draft Recommendation</u> No scientific review conducted.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until after legal review. An option to consider is funding for feasibility studies, an Environmental Impact Statement and design, which are the only tasks scheduled for FY 97 (estimated cost \$267.5).				
97260	Reduction and Cleanup of Marine Pollution in Port Graham	W. Meganack, Jr./Port Graham Village Council	ADFG	New 1st yr. 3 yr. project		\$616.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Under this project, the Port Graham Village Council will supervise the complete cleanup of the existing and potential pollution of the marine ecosystem of Port Graham. This cleanup will include out-of-use boats and vessels, cars, trucks, construction equipment and the associated waste material. Port Graham Village residents will be the main work force. All of the material will be transported to Kenai Peninsula Borough Approved Sanitation Sites.			<u>Chief Scientist's Draft Recommendation</u> Although the concept has some merit, the proposal is not strongly linked to marine pollution and injured resources. The dimensions of the problem, the means of proceeding to rectify the problem, and justifications of cost are not well presented. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. The link to restoration is weak and the high cost is not justified. However, the long-term reduction of marine pollution in lower Cook Inlet may have value for restoration. If the communities of lower Cook Inlet (Homer, Seldovia, Port Graham and Nanwalek) were interested in developing a regional waste management plan, a proposal should be considered in FY 98.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97283	Native Village of Eyak: Cordova Beach Cleanup and Restoration	B. Henrichs/Native Village of Eyak	ADEC	New 1st yr. 6 yr. project		\$193.7	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project has two parts. One part is the gathering of fishing nets through a beach cleanup. The beach cleanup will gather the debris during a one-month period. The second part is establishment of a year-round center so that nets and other recyclable items can be brought to the center to be sorted and prepared for transport to an urban recycling plant.		<u>Chief Scientist's Draft Recommendation</u> This project would clean up beaches and construct and operate a recycling facility in Cordova. The proposers have not demonstrated the magnitude of the problem, and, therefore, the benefits to injured marine resources are uncertain. Further, the recycling component of the project does not seem to fall within the restoration program. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. The proposal identifies a potential problem, entanglement of wildlife in fishing nets and other marine debris. However, this debris poses the greatest danger in marine waters and not once it reaches shore. Consequently, the proposed beach cleanup and recycling would not significantly improve the survival rate or condition of injured resources.						
97304	Kodiak Island Borough Master Waste Management Plan	J. Selby/Kodiak Island Borough	ADEC	New 1st yr. 1 yr. project		\$336.7	\$267.5	\$0.0	\$0.0	\$267.5
<u>Abstract</u> This project would develop an island-wide waste management plan for Kodiak Island in order to remove chronic sources of marine pollution and solid waste that may be affecting recovery of resources and services injured by the Exxon Valdez oil spill. The plan would focus on the six remote coastal villages which currently do not have adequate waste management practices and facilities. The master plan would be oriented towards achieving practical, measurable results through a project approach that involves the villages working together with the Kodiak Area Native Association and the Kodiak Island Borough to identify and implement opportunities for cost-effectively reducing sources of marine pollution.		<u>Chief Scientist's Draft Recommendation</u> There is need to reduce sources of chronic marine pollution in the Kodiak area, as was done for communities in Prince William Sound. Only those types of waste that end up in the marine environment and which conceivably could affect injured species are appropriate for Trustee Council action. In that regard, solid waste and scrap metal are probably not appropriate for further consideration. In addition, the budget seems high. The personnel time and travel should be reduced. Fund, but at a significantly reduced budget.		<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of a revised Detailed Project Description and revised budget that address the Chief Scientist's concerns. This project would reduce chronic pollution in marine environment near communities on Kodiak Island and thereby reduce stress on recovering resources and services. The focus of the project will be the six remote villages on the island. The waste streams that will be addressed in this regional plan are used oil generated by vessels and communities, household hazardous waste, solid waste, and sewage.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
	Habitat Improvement				\$879.6	\$892.4	\$662.6	\$759.6	\$0.0	\$1,422.2
97126	Habitat Protection and Acquisition Support	C. Fries/ADNR, D. Gibbons/USFS	ADNR	Cont'd 4th yr.						
	<u>Abstract</u> This project provides negotiation support to the Trustee Council in order to reach closure on habitat protection priorities. This support includes those services such as title reports, appraisals, on-site inspections, hazardous materials surveys, surveys, timber cruises and reviews, and other services necessary for the successful completion of habitat protection negotiations.	<u>Chief Scientist's Draft Recommendation</u> This working group is intended to provide baseline data that enables comparison of resource values on different lands under possible consideration for acquisition by the Trustee Council. This support is essential to the Trustee Council's small parcel acquisition program. The budget should receive additional review, and the on-going role of the Habitat Work Group, if any, needs clarification. Fund, after further review.					<u>Executive Director's Draft Recommendation</u> Some funding will be needed. Budget still under development.			
97180	Kenai Habitat Restoration & Recreation Enhancement Project	M. Rutherford/ADNR, M. Kuwada/ADFG	ADNR	Cont'd 2nd yr. 3 yr. project	\$879.6	\$621.8	\$594.8	\$759.6	\$0.0	\$1,354.4
	<u>Abstract</u> Adverse impacts to the banks of the Kenai River total approximately 19 miles of the river's 166 mile shoreline. Included in this total are 5.4 river miles of degraded shoreline on public land. Riparian habitats have been impacted by trampling, vegetation loss and structural development. This riparian zone provides important habitat for pink salmon, sockeye salmon and dolly varden, species injured by the Exxon Valdez oil spill. The project's objectives are to restore injured fish habitat, protect fish and wildlife habitat, enhance and direct recreation, and preserve the values and biophysical functions that the riparian habitat contributes to the watershed.	<u>Chief Scientist's Draft Recommendation</u> This is a concrete, on-going proposal for habitat restoration on degraded portions of the Kenai River, which are important for recreational services in the oil-spill area. The personnel appear to be well-qualified to do the work, though professional personnel costs seem high relative to the number of sites to be addressed in this project. The services of the agency representatives in planning for this project (i.e., the Interdisciplinary Team) should be contributed by the agencies and are normal agency management. Fund at a reduced level (perhaps \$550K).					<u>Executive Director's Draft Recommendation</u> Fund contingent on approval of reduced budget, to be prepared following final adoption of Environmental Assessment (probably June 15), which identifies specific projects to be funded. This project will aid restoration of habitat for the benefit of sockeye salmon and other fish species of commercial and recreational importance.			

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97230	Valdez Duck Flats Restoration Project	J. Winchester/PWSEDC	ADNR	New 1st yr. 2 yr. project		\$270.6	\$67.8		\$0.0	\$67.8

Abstract

The Alaska Department of Natural Resources has identified the waters of Valdez Duck Flats and nearshore waters east to the mouth of the Lowe River as crucial estuarine habitat in the Prince William Sound Area Plan. Wildlife species injured by the *Exxon Valdez* oil spill are threatened by crowding, disturbance, plastics pollution, and active human disturbance. The area provides important habitat for water birds, anadromous fish, and other estuarine and intertidal species. This proposal would further identify injured resources, aid in the recovery of spill impacted populations, mitigate effects of visitor traffic, design a local volunteer monitoring program, and educate the public about the value of tidelands.

Chief Scientist's Draft Recommendation

The apparent goal is to prevent loss of habitat values on the Valdez Duck Flats, an area which has some link to injured resources, including pink and sockeye salmon. Several tracts on the Duck Flats are under consideration for possible small-parcel acquisitions by the Trustee Council. The proposal has a heavy up front emphasis on engineering and construction, and it is not evident that the proposers will first conduct a thorough assessment of wildlife habitat needs and alternative ways of addressing those needs in the face of increasing development and visitor pressures. To their credit, the proposers seem to have the interest and cooperation of a number of key agencies and constituencies. Based on the information provided here, I cannot recommend funding this proposal. However, pending resolution of possible habitat acquisitions on the Duck Flats, perhaps it will be appropriate to give this proposal further consideration in the future.

Executive Director's Draft Recommendation

Fund development of a concept plan for protection of habitat on the Valdez Duck Flats, contingent on approval of a revised Detailed Project Description and reduced budget and an expression of support from the City of Valdez. The concept plan should include an assessment of environmental conditions in the flats, wildlife habitat needs of injured resources, and alternative ways of addressing those needs in the face of increasing development and visitor pressures. The Valdez Duck Flats are a large and complex intertidal mudflat and salt marsh that offers valuable habitat to several injured resources and services. A locally developed plan for protecting habitat on the Duck Flats will increase the probability that future use of the flats will promote the recovery of injured resources and services.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
	Ecosystem Synthesis					\$673.1	\$55.0	\$0.0	\$0.0	\$55.0
97054-BAA	A Mass-balance Model of Trophic Fluxes in Prince William Sound	D. Pauly/University of British Columbia	NOAA	New 1st yr. 2 yr. project		\$148.0	\$0.0			\$0.0

Abstract

This project would construct, validate, and disseminate a model of trophic interactions among the organisms of Prince William Sound, as required to synthesize the vast amount of information gathered before and after the 1989 *Exxon Valdez* spill, and to evaluate its impact at the ecosystem level. Project components are: 1) an initial workshop devoted to model specification by PWS researchers, 2) an extended study by project staff, and 3) a dissemination phase consisting of a training workshop for potential users of the software implementing the model, and the production of a CD-ROM for the public domain, incorporating an interactive graphic version of the software and an extensive database on the biology and local/traditional knowledge on the fishes of PWS.

Chief Scientist's Draft Recommendation

This is a two-year project which would integrate ecosystem-level data being generated from EVOS projects and present it in an understandable format. The is an excellent proposal and the investigators are among the best in the world at modeling fisheries ecosystems based on energetics. This proposal deserves further consideration as the Trustee Council develops a overall approach to modeling and synthesis needs. I recommend that it receive partial funding to enable continued participation in and development of a modeling program.

Executive Director's Draft Recommendation

Do not fund as a separate project. Efforts to develop ecological models that integrate the enormous amount of information gathered in EVOS studies will be initiated under Project /300 in FY 97.

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97215-BAA	Modeling Trophic Webs to Achieve Synthesis in SEA, NVP, and APEX Ecosystems	S. Pimm/University of Tennessee	NOAA	New 1st yr. 2 yr. project		\$75.6	\$0.0			\$0.0
	<u>Abstract</u> This project would formulate simple, large-scale trophic models of, and uniting, the communities of the APEX, SEA, and NVP projects. Using the data they gather and data from the literature, the project seeks a broad synthesis of the larger Prince William Sound and Gulf of Alaska ecosystems and the complex changes within them. It asks how do the changes in species' densities interact to produce the short- to long-term changes in species' densities that we observe? To what extent do different components resist changes elsewhere in the food web? How far and how quickly can we expect the effect of a change in one species' density to stretch through the food web?	<u>Chief Scientist's Draft Recommendation</u> This project would integrate information from most EVOS projects and provide a means of understanding how well we can predict cause-and-effect ecosystem interactions. This ability is at the heart of management needs at an ecosystem scale. This project deserves further consideration in relation to certain other of the ecosystem modeling proposals, in particular, 97054 (Pauly). Ideally, it should be possible to initiate modeling work in FY 97 on a modest basis, involving several key participants, including Dr. Pimm. Fund, but at a reduced level.	<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. Efforts to develop ecological models that integrate the enormous amount of information gathered in EVOS studies will be initiated under Project /300 in FY 97.							
97234	Ecosystem Synthesis Model of EVOS Restoration Findings for Resource Management	A. Hooten/Environmental Services Corporation of the Americas	NOAA	New 1st yr. 1 yr. project		\$198.4	\$0.0	\$0.0	\$0.0	\$0.0
	<u>Abstract</u> Previous research has generated considerable data on the abundance and distribution of species and the productivity of ecological communities throughout the spill-affected area. This project would integrate study results into a model (SYNOPSIS) to provide an ecosystem-level assessment capability. The approach discussed here builds on previously supported work and synthesizes results from various damage assessment and restoration studies, combined with expert analysis and interpretation.	<u>Chief Scientist's Draft Recommendation</u> This proposal unsuccessfully responds to the request for a broad ecological synthesis, as it is vague and expensive. Do not fund.	<u>Executive Director's Draft Recommendation</u> Do not fund, based on Chief Scientist's recommendation.							

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97249	Ecosystem Synthesis and Modeling	I. Show/SRA, Inc.	NOAA	New 1st yr. 6 yr. project		\$251.1	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would bring field results and local, traditional knowledge together in a single model. The modeling effort would progress through a logical sequence of steps, including verbal conceptual modeling, static and dynamic numerical modeling, and stochastic modeling. The final model would be a coupled physical-chemical-biological model; it would be driven by the physical environment and have parallel chemical and biological sub-models addressing interactions between petroleum hydrocarbons and the biota. The model would be designed to serve as a platform for description, prediction, and hypothesis development and testing.			<u>Chief Scientist's Draft Recommendation</u> This proposal is not a strong response to the request for a broad ecological synthesis, as it is vague and expensive. The proposer has a great variety of experience, but practically no credible record of publication in the peer-reviewed literature. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund, based on Chief Scientist's recommendation.				
97300	Ecosystem Synthesis: Modeling and Communication Efforts			New			\$55.0			\$55.0
<u>Abstract</u> This project would synthesize information on the injury and recovery status of injured species and habitats. The initial synthesis product should be completed in FY 97. There also is need to initiate development of ecological models that integrate the enormous amount of information gathered in EVOS studies. The results of this modeling effort would be managed by the Chief Scientist in cooperation with agency representatives, investigators, and outside experts.			<u>Chief Scientist's Draft Recommendation</u>			<u>Executive Director's Draft Recommendation</u> Some level of funding will be recommended. Project still under development.				

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Public Information and Education						\$2,737.6	\$100.0	\$0.0	\$0.0	\$100.0
97183	Placement of "Darkened Waters: Profile of an Oil Spill" in a Permanent, Alaska Exhibition Site	M. O'Meara/Pratt Museum	ADFG	New 1st yr. 2 yr. project			\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would result in acquisition and placement of the traveling version of "Darkened Waters: Profile of an Oil Spill" in a permanent, Alaskan exhibition site.		<u>Chief Scientist's Draft Recommendation</u> "Darkened Waters" was a fine exhibit that deserves a permanent home. The exhibition could have on-going value by increasing awareness of and participation in the restoration process. However, this proposal does not shed much light on what is required in the way of a permanent home, nor the feasibility of actually finding such a home. There is no cost estimate. Apparently the Pratt Museum is not in a position to serve as home for this exhibit. Based on the information provided here, no funding can be recommended.		<u>Executive Director's Draft Recommendation</u> Do not fund. Although "Darkened Waters" is an excellent exhibit on the history of the spill, its link to restoration is weak. Furthermore, the cost of this project is unknown because it relies on negotiation over the cost of purchasing the exhibit.						
97221-BAA	Developing a Trustee Council Information Infrastructure	L. Thomas/Mitretek Systems	ADNR	New 1st yr. 1 yr. project		\$214.0	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Mitretek Systems proposes to assist the Exxon Valdez Oil Spill Trustee Council to develop an information framework and infrastructure that will serve the needs of the community of researchers, resource managers, educators, and local citizens involved in and affected by the restoration effort resulting from the oil spill. The purpose of this information infrastructure is to help maximize the benefit from the Trustee Council's investment in research, monitoring, restoration, and public education directed at understanding and restoring the northern Gulf of Alaska and Prince William Sound region affected by the oil spill.		<u>Chief Scientist's Draft Recommendation</u> The management and maintenance of EVOS data in ways that are useful and accessible to researchers and the public is an important problem. This type of project would probably be beneficial and the approach outlined in this proposal seems appropriate. The cost is very expensive, however, and does not include on-going costs. The proposers also do not demonstrate any awareness of existing data management efforts supported by the Trustee Council. Do not fund.		<u>Executive Director's Draft Recommendation</u> Do not fund. This proposal duplicates the Trustee Council's Information Management System that began in FY 95 as part of 95089 and continues to be funded in 1100.						

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97232	Endowment of an Engineering Research Center at the University of Alaska Anchorage	G. Baker, H. Schroeder, C. Woodard/UAA	ADFG	New 1st yr. 1 yr. project		\$2,256.5	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Proposed is a plan for the establishment of an endowed engineering research and community education center at the University of Alaska Anchorage. The program will be created within the Environmental Quality Engineering program of the School of Engineering. Establishing the center will achieve two goals. First, it will provide a mechanism for funding continuing recovery work and community education long after 2002 when funds are no longer received by Alaska. Such activities will help Alaska develop local expertise and permanent solutions for the protection and restoration of areas affected by the <i>Exxon Valdez</i> oil spill. Funding the center at UAA will also serve as a test program for endowed academic centers and chairs.			<u>Chief Scientist's Draft Recommendation</u> This proposal is premature, as there are legal and policy questions about creation of endowments, and this proposal will do nothing to resolve them. In addition, the substance of the proposal is oriented toward engineering issues, such as oil spill response and prevention, not restoration of living resources and ecosystems. The proposed subject of the endowment would also seem to conflict with the mission of the Oil Spill Recovery Institute, which was established by Congress. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. Although the Engineering Research Center may benefit restoration, its primary purpose appears to be preparation for future spills and student education, uses which are not eligible for restoration funding. Previous proposals for endowments have been rejected.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97275	Rural Development Applied Field-Based Research Program in Oil Spill Affected Areas	G. Pullar/UAF-College of Rural Alaska	ADFG	New 1st yr. 6 yr. project		\$161.4	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

Human resources will be strengthened through an interdisciplinary Bachelor's degree program in Rural Development and community restoration through applied research, distance education, and mentoring. Trustee Council priorities will be addressed integrating western science and indigenous knowledge. Students will be provided with a broad understanding of rural development in a global economy and a mastery of specific tools for effective community leadership. Specialization in one of five areas is linked to jobs in communities. Coursework will be delivered through interactive video and other distance delivery techniques and intensive rural development seminars.

Chief Scientist's Draft Recommendation

This proposal is an excellent idea, with a sound technical approach. However, it is justified based on an implied lack of leadership in the community, which does not seem to be apparent. The proposal lacks sufficient relationship to restoration objectives. Do not fund.

Executive Director's Draft Recommendation

Do not fund. Although the proposed research program could prove to be an effective way to use traditional ecological knowledge in restoration, the proposal does not describe the research projects in which the students would be engaged so it is not possible to evaluate their value for restoration.

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Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommen- ded	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97301	<u>The Alaska Laboratory Series</u> Television Pilot	G. Bolar/Alaska Public Telecommunications, Inc.	ADFG	New 1st yr. 3 yr. project		\$105.7	\$100.0	\$0.0	\$0.0	\$100.0
<u>Abstract</u> Alaska Public Telecommunications, Inc. proposes to create a television program that will document ongoing restoration and rehabilitation efforts in Prince William Sound and other spill affected areas. This program will be a pilot to launch <u>The Alaska Laboratory</u>, a national science education series on science and research in Alaska. Many episodes, including the pilot, will center on marine research, rehabilitation, and restoration efforts in PWS, the Kenai Peninsula and the Gulf of Alaska. APTI, in cooperation with the Alaska SeaLife Center, will produce and distribute the series through national networks, cable, and on Alaska's PBS stations.			<u>Chief Scientist's Draft Recommendation</u> The proposed television program could increase awareness, both within and beyond Alaska, about the restoration program. This particular proposal is not strong--it is more of an idea than a full proposal. I do not know what priority the Trustee Council wants to give to educational projects such as this television program, but the idea does have merit and may deserve going forward. If deemed appropriate by the Trustee Council, a more complete proposal should be invited. As written, however, I cannot recommend funding.			<u>Executive Director's Draft Recommendation</u> Fund an educational television program similar to that described in this proposal. This project would develop a one-hour television program about the restoration and recovery of the spill area, distribute copies of the program throughout Alaska, and distribute the program nationally. An in-depth television program could be an effective means of informing the general public about the restoration effort and would complement other components of the Trustee Council's information program, which includes OSPIC, written reports, radio spots, an automated database, and a website. Because this project is not eligible for funding under the BAA and several firms are capable of producing these programs, a request for proposals should be issued and the work should be performed under contract.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recommended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Research Facilities						\$1,686.4	\$0.0	\$0.0	\$0.0	\$0.0
97151-BAA	Facilities Improvement to the Prince William Sound Science Center	G. Thomas/Prince William Sound Science Center	NOAA	New 1st yr. 3 yr. project		\$537.6	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would expand the Prince William Sound Science Center facility to include more office and laboratory space, and additional rooms for educational activities. Phase 1 of the expansion will result in consolidation of all current staff in one building and can be completed by the end of 1997. The Center has 27 people working at three different sites in Cordova; organizational efficiency and annual operating costs are impaired by this fragmentation. Phase 2 will enhance the facility to meet the needs of the Oil Spill Recovery Institute.		<u>Chief Scientist's Draft Recommendation</u> Phase I of the proposed construction would both expand and consolidate office and meeting space used by the Science Center Investigators for project 320 (SEA). In some measure, construction of this facility could duplicate the investment already made at the Alaska SeaLife Center in Seward. However, the facilities have substantially different purposes. A decision to fund this proposal is largely a policy matter best addressed by others. However, it does appear that this facility would be beneficial to the productivity of the SEA project if it can be constructed before the end of the program in FY 98.			<u>Executive Director's Draft Recommendation</u> Defer decision on funding until after legal review. An option to consider is funding only that part of the Phase I expansion necessary to improve working conditions for researchers on the Sound Ecosystem Assessment (estimated cost \$380.0). The Phase I expansion would increase the size of the existing center by 2,500 sf to consolidate existing staff and would be completed January 30, 1997. Do not fund Phase II of the facility expansion, the construction of a 50,000 sf Science-Community Center campus that would house the Oil Spill Recovery Institute. The PWS Science Center has asked the Trustee Council to contribute \$8.5 million in FY 98-99 toward the 10-year Phase II expansion.					

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom- mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97171	Alaska Department of Fish and Game Mariculture Technical Center Operational Funding	T. Rutz/ADFG, J.Cochran/ADFG	ADFG	New 1st yr. 5 yr. project		\$271.8	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project would operate a facility where bivalve shellfish and aquatic plant research could take place. The ability of the Mariculture Technical Center to hold large culture phytoplankton and to rear large numbers of bivalve shellfish would be unique within the State of Alaska. This capability would open new avenues for research and research funding beneficial to the restoration of subsistence shellfish resources lost or diminished as a result of the Exxon Valdez oil spill.		<u>Chief Scientist's Draft Recommendation</u> This is a good project that is difficult to judge by the mainly scientific criteria used to evaluate the FY 97 proposals. Defining a common set of criteria to judge this and other nonresearch proposals requires a venture into the policy arena. In my judgement, success in aquaculture requires momentum that builds with success. My concern is that if the MTC never gets off the ground with solid achievements, and is therefore unable to attract other long-term sources of revenue, the Trustees may be saddled with operational support of this facility for many years. Although there may be some argument for limited, short-term support to start-up the facility for the benefit of the Shellfish Hatchery component (which ties into project 97131), the reviewers cannot recommend either substantial or extended funding of facility operations. Do not fund as proposed.		<u>Executive Director's Draft Recommendation</u> Do not fund. General funding of operation of the state's mariculture facility is not related to the restoration objectives adopted by the Trustee Council. However, it is appropriate for the Council to contribute to that portion of the facility operation that is related to the success of the ongoing clam restoration effort, and funds are being recommended in Project 97131 for that purpose.						
97197	Alaska SeaLife Center Fish Pass	J. Seeb/ADFG	ADFG	New 1st yr. 1 yr. project		\$745.1	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> This project will design, construct, and install a fish pass at the Alaska SeaLife Center in Seward. The fish pass will be used to propagate experimental runs of Pacific salmon for new and ongoing genetic studies to be conducted at the Center. A cooperative agreement, similar to the agreement for the SeaLife Center, will be written by ADFG with the City of Seward to implement this project.		<u>Chief Scientist's Draft Recommendation</u> This is a technically excellent idea that will benefit basic research on genetics of salmon, provide an experimental run that is not available in this portion of the state. It also has significant positive benefits for public education. The Trustee Council should fund through nonworkplan sources after engineering review.		<u>Executive Director's Draft Recommendation</u> Defer decision on funding until after legal review and assessment of funding options.						

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97238	Kachemak Bay Shellfish Nursery Culture Project	M. Bradley/Kachemak Shellfish Mariculture Association	ADFG	New 1st yr. 2 year project		\$82.1	\$0.0	\$0.0	\$0.0	\$0.0
<u>Abstract</u> Through shellfish nursery research at aquatic farms and other facilities in Kachemak Bay, this project would aid in the restoration of subsistence resources or services lost or diminished by the oil spill. This project would complement the shellfish hatchery being constructed in Seward as a component of the Mariculture Technical Center. The project would construct an upwell nursery facility and develop techniques specific to Alaska to improve the survival and growth rates of hatchery produced bivalves.			<u>Chief Scientist's Draft Recommendation</u> This proposal to build and test a floating, tidally-driven (FLUPSY) bivalve nursery system and to test this technology on oyster spat. In the on-going project 97131, the Trustee Council already is supporting testing of a similar facility at Tatitlek. In addition, as proposed, this project has little to do with EVOS restoration objectives, since it would experiment with oysters, which are not an injured resource. Do not fund.			<u>Executive Director's Draft Recommendation</u> Do not fund. This project would experiment with oysters, which are not an injured resource, and therefore has a weak link to restoration objectives adopted by the Trustee Council.				

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
97252	Investigations of Genetically Important Conservation Units of Species Inhabiting the EVOS Area	J. Seeb, L. Seeb/ADFG	ADFG	New 1st yr. 7 yr. project		\$49.8	\$0.0	\$0.0	\$0.0	\$0.0

Abstract

This project will plan the consolidation of all of the Trustee Council-funded projects of the ADFG Genetics Laboratory into the facilities at the Alaska SeaLife Center in Seward. This project will eventually become the principal project into which all other oil spill-related studies conducted by the ADFG Genetics Laboratory will be integrated. The Genetics Laboratory developed in the Alaska SeaLife Center through this project will also provide core facilities for the genetic analysis of populations of marine fish and non-fish vertebrates and invertebrates for principal investigators conducting research at the Seward facility.

Chief Scientist's Draft Recommendation

The Trustee Council has made a major investment in fisheries genetics because of the benefits to long-term restoration and mangement. The Trustee Council has also made a major investment in construction of state-of-the-art marine research facility in Seward. This proposal, which is to plan for the consolidation of Trustee Council sponsored genetics work at the Alaska SeaLife Center, has merit, though some of what is proposed here would appear to be normal agency management. The products are not well defined. Some funding seems appropriate. Fund at 3.0 months and modest expenses. No commitments to out -year funding should be made until a better plan for consolidation of the genetics program is presented. It would be particularly appropriate for the P.I. to discuss in some detail how the most promising new tools in this rapidly evolving field can be folded into this program in a cost-effective manner given the capabilities of present ADF&G staff and subcontractors.

Executive Director's Draft Recommendation

Do not fund. The proposal for FY 97 is to plan for the transfer of ADFG genetics studies to the Alaska SeaLife Center and to plan for future genetics investigations. These planning efforts are worthwhile and responsive to the FY 97 Invitation, but upon further consideration appear to be a normal agency responsibility.

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION -- FY 97 WORK PLAN

Proj.No.	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Expected	FY97 Request	FY97 Recom-mended	FY98 Rec.	FY99 Rec.	Total FY97-02 Rec.
Project Management						\$584.4	\$579.2			\$579.2
97250	Project Management	All Trustee Council Agencies		Cont'd Annual		\$584.4	\$579.2			\$579.2

Abstract

Project management represents those costs incurred by the state and federal trustee agencies in fulfilling their responsibility to ensure that individual projects are managed consistent with the Memorandum of Agreement and Consent Decree, the Restoration Plan, and Trustee Council authorization. Prior to FY 97, the costs associated with project management were included in each individual project's budget. The FY 97 request consists of:
 Alaska Department of Fish and Game - \$358.1
 National Oceanic and Atmospheric Administration - \$98.2
 U.S. Department of the Interior - \$61.9
 U.S. Forest Service - \$66.2

Chief Scientist's Draft Recommendation

Executive Director's Draft Recommendation

Some level of funding will be recommended; details are being worked out.

Proj. No.		Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request	Executive Director's Recommendation					
								FY97	FY98	FY99	FY00-02	Sum FY97-02	
Pink Salmon						\$1,887.5	\$3,495.4	\$1,860.6	\$809.5	\$238.4	\$32.0	\$2,940.5	
97076	Effects of Oiled Incubation Substrate on Straying and Survival of Wild		NOAA	A. Wertheimer/NOAA	Cont'd	\$619.0	\$623.2	Fund contingent	\$618.8	\$234.6	\$0.0	\$0.0	\$853.4
97093	Restoration of Prince William Sound Pink Salmon by Diversion of		ADFG	T. Linley/Prince William Sound	New		\$484.7	No rec. yet	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97139A1	Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier		ADFG	S. Honnold/ADFG	Cont'd	\$35.0	\$26.4	Fund contingent	\$26.4		\$0.0	\$0.0	\$26.4
97139A2	Port Dick Creek Tributary and Development Project		ADFG	N. Dudiak/ADFG	Cont'd	\$37.0	\$82.7	Fund contingent	\$68.7	\$49.7	\$39.7	\$32.0	\$190.1
97139C1-CL	Montague Riparian Rehabilitation Monitoring		USFS	D. Schmid/USFS	Cont'd	\$0.0	\$9.3	Fund closeout	\$9.3	\$0.0	\$0.0	\$0.0	\$9.3
97186	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound		ADFG	T. Joyce/ADFG	Cont'd	\$260.5	\$275.1	Fund contingent	\$265.6	\$260.5	\$85.0	\$0.0	\$611.1
97188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon In Prince		ADFG	T. Joyce/ADFG	Cont'd	\$100.5	\$122.4	Fund contingent	\$100.5	\$100.5	\$55.0	\$0.0	\$256.0
97190	Construction of a Linkage Map for the Pink Salmon Genome		ADFG	F. Allendorf/Univ. Montana	Cont'd	\$250.0	\$267.5	Fund contingent	\$254.5				\$254.5
97191A	Field Examination of Oil-Related Embryo Mortalities that Persist in Pink		ADFG	M. Willette/ADFG	Cont'd	\$407.0	\$283.4	Fund contingent	\$200.0	\$164.2	\$58.7	\$0.0	\$422.9
97194	Pink Salmon Spawning Habitat Recovery		NOAA	M. Murphy and S. Rice/NOAA	New		\$138.3	Fund contingent	\$138.3		\$0.0	\$0.0	\$138.3
97196	Genetic Structure of Prince William Sound Pink Salmon		ADFG	J. Seeb/ADFG	Cont'd	\$178.5	\$236.0	Fund contingent	\$178.5			\$0.0	\$178.5
97209	Examination of Straying of Hatchery Pink Salmon into Wild Populations		ADFG	T. Joyce/ADFG	New		\$123.9	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97228	Quantitative Genetic Assessment of Embryo Mortality and Developmental		NOAA	B. Smoker/UAF	New		\$96.7	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97284	Restoration of Prince William Sound Pink Salmon through Test Fishery		DOI	B. Heinrichs/Native Village of	New		\$511.8	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97321-BAA	Model Integration of Pink Salmon Restoration		NOAA	C. Coutant and W.	New		\$214.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Pacific Herring						\$930.6	\$1,222.7	\$534.9	\$437.6	\$0.0	\$0.0	\$972.5	
97162	Investigations of Disease Factors Affecting Declines of Pacific Herring		ADFG	G. Marty/UC Davis; R.	Cont'd	\$510.6	\$538.3	Fund contingent	\$512.5	\$437.6	\$0.0	\$0.0	\$950.1
97165	Genetic Discrimination of Prince William Sound Herring Populations		ADFG	J. Seeb/ADFG	Cont'd	\$120.0	\$121.9	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97166-CLO	Herring Natal Habitats		ADFG	M. Willette/ADFG	Cont'd	\$300.0	\$260.7	Fund closeout	\$22.4	\$0.0	\$0.0	\$0.0	\$22.4
97168-BAA	Restoration of Commercial Fishing Services: Social Ecology of the		NOAA	M. Downs/Impact Assessment,	New		\$235.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97248	Collection of Historical Data and Local Environmental Knowledge of		ADFG	J. Seitz	New		\$66.8	Do not fund (352)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
SEA and Related Projects						\$3,685.0	\$4,988.0	\$3,828.2	\$2,558.0	\$115.0	\$75.0	\$6,576.2	
97195	Pristane Monitoring in Mussels		NOAA	J. Short/NOAA	Cont'd	\$85.0	\$115.3	Fund contingent	\$111.8	\$115.0	\$115.0	\$75.0	\$416.8
97243	Water Resources of Prince William Sound		DOI	J. Dorava/USGS	New		\$814.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

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PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 97 WORK PLAN

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					Executive Director's Recommendation							
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request	FY97	FY98	FY99	FY00-02	Sum FY97-02	
97303-BAA	Sentinel Program for Walleye Pollock in the Greater Prince William Sound	NOAA	G. Thomas, T. Kline/Prince	New		\$120.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97320	Sound Ecosystem Assessment (SEA)	ADFG	T. Cooney, et al.	Cont'd	\$3,600.0	\$3,766.4	Fund contingent	\$3,716.4	\$2,443.0			\$6,159.4
97322-BAA	Jellyfish as Predators and Competitors of Age-0 Fishes	NOAA	T. Kline/Prince William Sound	New		\$171.3	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Sockeye Salmon					\$391.0	\$1,390.1	\$422.2	\$7.1	\$0.0	\$0.0	\$429.3	
97048-BAA	Analysis of Historical Sockeye Salmon Growth Among Populations	NOAA	G. Ruggerone/Natural Resources	Cont'd	\$0.0	\$31.9	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97239	Salmon Carcasses and Juvenile Chinook Salmon Production in the Kenai	ADFG	D. Schmidt/ADFG	New		\$136.8	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97251	Akalura Lake Sockeye Salmon Restoration	ADFG	S. Honnold/ADFG	New		\$388.7	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97254	Delight and Desire Lakes Restoration Project	ADFG	N. Dudiak/ADFG	New		\$129.3	Fund contingent	\$122.2	\$7.1	\$0.0	\$0.0	\$129.3
97255-CLO	Kenai River Sockeye Salmon Restoration	ADFG	L. Seeb, J. Seeb, K.	Cont'd	\$100.0	\$193.3	Fund closeout	\$100.0	\$0.0	\$0.0	\$0.0	\$100.0
97258A-CL	Sockeye Salmon Overescapement Project	ADFG	D. Schmidt/ADFG	Cont'd	\$150.0	\$289.9	Fund closeout	\$150.0	\$0.0	\$0.0	\$0.0	\$150.0
97259-CLO	Restoration of Coghill Lake Sockeye Salmon	ADFG	G. Kyle/ADFG	Cont'd	\$141.0	\$220.2	Fund closeout	\$50.0	\$0.0	\$0.0	\$0.0	\$50.0
Cutthroat Trout and Dolly Varden					\$200.0	\$1,113.1	\$283.2	\$100.0	\$0.0	\$0.0	\$383.2	
97043B-CL	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement	USFS	D. Gillikin/USFS	Cont'd		\$24.0	Fund closeout	\$24.0	\$0.0	\$0.0	\$0.0	\$24.0
97145	Cutthroat Trout and Dolly Varden: Relation Among and Within	USFS	G. Reeves/USFS, Pacific	Cont'd	\$200.0	\$229.7	Fund	\$229.7	\$100.0	\$0.0	\$0.0	\$329.7
97172	Cutthroat Trout and Dolly Varden Recovery in Prince William Sound	ADFG	A. Hoffman/ADFG	New		\$402.3	Do not fund	\$0.0				\$0.0
97174	Cutthroat Trout and Dolly Varden in PWS: Restoration Project Support	ADFG	A. Hoffman/ADFG	New		\$157.5	Fund contingent	\$16.7				\$16.7
97242	Characteristics of the Cutthroat Trout Resources of Prince William Sound	DOI	J. Dorava & B. Black/USGS	New		\$265.4	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97302	Prince William Sound Cutthroat Trout, Dolly Varden Char Inventory	USFS	K. Hodges/USFS	New		\$34.2	Fund contingent	\$12.8		\$0.0	\$0.0	\$12.8
Marine Mammals					\$687.3	\$814.1	\$461.1	\$260.0	\$50.0	\$0.0	\$771.1	
97001	Recovery of Harbor Seals From EVOS: Condition and Health Status	ADFG	M. Castellini/UAF	Cont'd	\$192.3	\$195.5	No rec. yet			\$0.0	\$0.0	\$0.0
97012-BAA	Comprehensive Killer Whale Investigation in Prince William Sound	NOAA	C. Matkin/North Gulf Oceanic	Cont'd		\$157.5	Defer	\$0.0				\$0.0
97064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	ADFG	K. Frost/ADFG	Cont'd	\$347.0	\$317.8	Fund	\$317.8	\$150.0	\$50.0	\$0.0	\$517.8
97170	Isotope Ratio Studies of Marine Mammals in Prince William Sound	ADFG	D. Schell/UAF-IMS	Cont'd	\$148.0	\$143.3	Fund	\$143.3	\$110.0	\$0.0	\$0.0	\$253.3

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					Executive Director's Recommendation							
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request		FY97	FY98	FY99	FY00-02	Sum FY97-02
Nearshore Ecosystem					\$1,869.3	\$3,616.8		\$2,145.8	\$1,753.7	\$524.8	\$224.4	\$4,648.7
97025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate	DOI	L. Holland-Bartels, et	Cont'd	\$1,669.4	\$2,044.8	Fund cont; defer	\$1,669.4	\$1,669.4	\$450.0	\$0.0	\$3,788.8
97090	Mussel Bed Restoration and Monitoring	NOAA	M. Babcock/NOAA	New	\$0.0	\$17.6	Fund contingent	\$10.0	\$0.0	\$0.0	\$0.0	\$17.6
97157-BAA	Intertidal Monitoring Using Carbon and Oxygen Isotope Indicators of	NOAA	M. Morgenstein and D.	New		\$85.3	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97158	Monitoring Nearshore Ecosystems in Katmai National Park, Alaska	DOI	B. Goatcher/Katmai National	New		\$56.4	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97161	Differentiation and Interchange of Harlequin Duck Populations Within the	DOI	B. Goatcher/Katmai National	Cont'd	\$78.9	\$104.4	Fund contingent	\$98.6	\$9.5	\$0.0	\$0.0	\$108.1
97181-BAA	Prince William Sound Intertidal Recovery Monitoring	NOAA	J. Houghton/Pentec	New		\$299.4	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97223-BAA	Integration and Publication of Pre- and Post-Spill Data on Sea Otter	NOAA	L. Rotterman and C.	New		\$79.0	Fund contingent	\$40.0	\$0.0	\$0.0	\$0.0	\$40.0
97227	Status and Recovery of Intertidal Communities	ADFG	M. Stekoll and R.	New		\$276.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97233	Body Condition of Sea Otters in Prince William Sound	NOAA	L. Rotterman and C.	New		\$11.8	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97240	Clam Recruitment: Investigation of Settlement Limitation and	DOI	G. Irvine/NBS-DOI	New		\$237.9	Do not fund	\$0.0				\$0.0
97290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	NOAA	J. Short/NOAA	Cont'd	\$121.0	\$77.3	Fund contingent	\$74.8	\$74.8	\$74.8	\$224.4	\$448.8
97427	Harlequin Duck Recovery Monitoring	ADFG	D. Rosenberg/ADFG	Cont'd		\$254.6	Fund contingent	\$253.0				\$253.0
97429	Responses of River Otters to Oil Contamination: Controlled Study of	DOI	T. Bowyer/UAF	New		\$72.3	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Seabird/Forage Fish and Related Projects					\$1,846.2	\$3,655.8		\$2,172.6	\$1,851.5	\$1,820.0	\$176.4	\$6,020.5
97142	Status and Ecology of Kittlitz's Murrelets in Prince William Sound	NOAA	R. Day/ABR, Inc.	Cont'd		\$188.5	Fund contingent	\$188.5	\$0.0	\$0.0	\$0.0	\$188.5
97144	Common Murre Population Monitoring	DOI	D. Roseneau/DOI-FWS	Cont'd	\$70.5	\$73.8	Fund	\$73.8	\$21.5	\$0.0	\$0.0	\$95.3
97159-CLO	Surveys to Monitor Marine Bird Abundance in Prince William Sound	DOI	B. Agler/DOI-FWS	Cont'd	\$25.0	\$83.0	Fund closeout	\$45.4				\$45.4
97163A-P	APEX: Alaska Predator Ecosystem Experiment in Prince William Sound	NOAA	D. Duffy, et al/UAA	Cont'd	\$1,750.7	\$2,287.8	Fund contingent	\$1,800.0	\$1,800.0	\$1,800.0	\$176.4	\$5,576.4
97167-BAA	Preparation and Curation of Seabirds Salvaged from the Exxon Valdez	DOI	S. Rohwer/University of	New		\$41.0	Fund contingent	\$32.1	\$0.0	\$0.0	\$0.0	\$32.1
97169-BAA	A Genetic Study to Aid in Restoration of Murres, Guillemots, and	DOI	V. Friesen/Queen's University,	New		\$153.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97182-BAA	Phenology of Kittlitz's Murrelets in Prince William Sound	NOAA	R. Burns and L.	New		\$247.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97224	Forage Fish Assessment of the Cook Inlet, Shelikof Strait, and Gulf of	DOI	V. Elliott/DOI-MMS, A.	New		\$110.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97231	Alaska Oil and Gas Development Assessment Areas Marbled Murrelet Productivity Relative to Forage Fish Availability and	DOI	Bennett/DOI-NPS K. Kuletz/FWS	New		\$217.7	Lower priority	\$0.0				\$0.0
97235	Sand Lance Literature Review and Synthesis	NOAA	B. Nelson and S. Rice/NOAA	New		\$42.3	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

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					Executive Director's Recommendation							
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request		FY97	FY98	FY99	FY00-02	Sum FY97-02
97253-BAA	Factors that Limit Seabird Recovery in the EVOS Study Area: A	DOI	D. Ainley/H.T. Harvey &	New		\$93.8	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97305	Monitoring Response of Seabirds to Changing Prey Availability Using	DOI	J. Piatt/DOI-NBS	New		\$90.1	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97306	Ecology and Demographics of Pacific Sand Lance in Lower Cook Inlet	DOI	J. Piatt/DOI-NBS	New		\$27.8	Fund contingent	\$32.8	\$30.0	\$20.0	\$0.0	\$82.8
Archaeological Resources					\$195.0	\$314.7		\$220.2	\$205.0	\$135.0	\$405.0	\$965.2
97007A	Archaeological Index Site Monitoring	ADNR	D. Reger/ADNR	Cont'd	\$135.0	\$192.2	Fund contingent	\$135.0	\$145.0	\$135.0	\$405.0	\$820.0
97007B	Site Specific Archaeological Restoration	USFS	L. Yarborough/USFS	New	\$0.0	\$27.2	Fund contingent	\$18.9	\$0.0	\$0.0	\$0.0	\$18.9
97149	Archaeological Site Stewardship	ADNR	D. Reger/ADNR	Cont'd	\$60.0	\$95.3	Fund contingent	\$66.3	\$60.0	\$0.0	\$0.0	\$126.3
Subsistence					\$1,226.0	\$6,281.8		\$1,180.9	\$909.0	\$632.0	\$825.0	\$3,546.9
97009D-CL	Survey of Octopuses in Intertidal Habitats	USFS	D. Scheel/Prince William Sound	Cont'd	\$40.9	\$53.3	Fund contingent	\$48.0	\$0.0	\$0.0	\$0.0	\$48.0
97052	Community Involvement/Traditional Ecological Knowledge	ADFG	P. Brown/Chugach Regional	Cont'd	\$250.0	\$378.8	Fund contingent	\$250.0	\$250.0	\$250.0	\$750.0	\$1,500.0
97127	Tatitlek Coho Salmon Release	ADFG	G. Kompkoff/Tatitlek IRA	Cont'd	\$15.9	\$12.0	Fund contingent	\$11.1	\$12.0	\$12.0	\$0.0	\$35.1
97131	Chugach Native Region Clam Restoration	ADFG	D. Daisy/Chugach Regional	Cont'd	\$413.6	\$401.4	Fund contingent	\$310.0	\$275.0	\$275.0	\$0.0	\$860.0
97156	EVOS Restoration Public Access & Education Program	ADFG	H. Tomingas/Ocean Explorers	New		\$267.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97210	Youth Area Watch	ADFG	R. Sampson/Chugach School	Cont'd	\$100.0	\$203.4	Fund contingent	\$120.0	\$120.0	\$0.0	\$0.0	\$240.0
97214-CLO	Documentary on Subsistence Harbor Seal Hunting in Prince William	ADFG	B. Simeone/ADFG	Cont'd	\$0.0	\$12.1	Fund contingent	\$5.4	\$0.0	\$0.0	\$0.0	\$5.4
97220	Eastern PWS Wildstock Salmon Habitat Restoration	USFS	D. Schmid/USFS	Cont'd	\$115.0	\$118.0	Fund part, defer	\$92.0	\$92.0	\$20.0	\$0.0	\$204.0
97222	Chenega Bay Salmon Habitat Enhancement (Stream 667 Fish Pass)	USFS	USFS	Cont'd	\$56.4	\$78.8	Defer	\$0.0		\$0.0	\$0.0	\$0.0
97225	Port Graham Pink Salmon Subsistence Project	ADFG	E. Anahonak, Port Graham IRA	Cont'd	\$83.1	\$80.4	Fund contingent	\$74.4	\$75.0	\$75.0	\$75.0	\$299.4
97244	Community-Based Harbor Seal Management and Biological Sampling	ADFG	M. Reidel/Alaska Native Harbor	Cont'd	\$100.0	\$155.7	Fund contingent	\$100.0	\$85.0	\$0.0	\$0.0	\$185.0
97245-BAA	Community-Based Harbor Seal Research	ADFG	M. Reidel/Alaska Native Harbor	New		\$274.3	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97247	Kametolook River Coho Salmon Subsistence Project	ADFG	J. McCullough & L.	New		\$46.2	Defer	\$0.0				\$0.0
97256A	Sockeye Salmon Stocking at Columbia Lake	USFS	K. Murphy/USFS	Cont'd		\$34.4	Defer	\$0.0				\$0.0
97256B	Sockeye Salmon Stocking at Solf Lake	USFS	K. Murphy/USFS	Cont'd		\$16.8	Defer	\$0.0				\$0.0
97261	Port Graham Landowners Resource Ethic and Stewardship Subsistence	ADFG	W. Meganack, Jr./Port Graham	New		\$443.6	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97262	Shoreline Inventory, and Protection and Enhancement of Shorelines on	ADFG	W. Meganack, Jr./Port Graham	New		\$595.7	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 97 WORK PLAN

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					Executive Director's Recommendation							
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request	FY97	FY98	FY99	FY00-02	Sum FY97-02	
97263	Assessment, Protection and Enhancement of Salmon Streams on Port	ADFG	W. Meganack, Jr./Port Graham	New		\$1,404.6	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97264	Inventory, Assessment, Protection & Enhancement of Wetlands &	ADFG	W. Meganack, Jr./Port Graham	New		\$417.8	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97265	Subsistence Enhancement on Port Graham Corporation Uplands: Planting	ADFG	W. Meganack, Jr./Port Graham	New		\$334.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97267	Port Graham Floating Skiff Dock for Subsistence Harvesters	ADFG	W. Meganack, Jr./Port Graham	New		\$62.5	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97268	Funding for Educational Harvest Trips: Port Graham	ADFG	W. Meganack, Jr./Port Graham	New		\$22.0	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97271	Status of Subsistence Marine Mammals in the Lower Cook	ADFG	F. Elvsas/Seldovia Village	New		\$116.0	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97272-CLO	Chenega Chinook Release Program	ADFG	J. Milton/Prince William Sound	Cont'd	\$51.1	\$45.0	Fund closeout	\$45.0	\$0.0	\$0.0	\$0.0	\$45.0
97276	Access Road to Donor Bay as Replacement for Chignik Lagoon	ADFG	J. Lind/Chignik Lake Village	New			Do not fund	\$0.0				\$0.0
97281	Habitat Improvement Through Redesigned Forest Workshops	USFS	R. Ott/Native Village of Eyak	New		\$115.8	Fund contingent	\$50.0	\$0.0	\$0.0	\$0.0	\$50.0
97282	Sea Otter Population Monitoring	DOI	Native Village of Eyak	New		\$287.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97286	Elders/Youth Conference on Subsistence and the Oil Spill	DOI	B. Henrichs/Native Village of	New		\$131.7	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97295	Dissemination of Traditional Knowledge	ADNR	D. Mortenson/ADNR	New		\$172.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97352	Traditional Ecological Knowledge: A Consolidated Approach			New			Fund	\$75.0				\$75.0
Reduction of Marine Pollution						\$1,146.9		\$267.5	\$0.0	\$0.0	\$0.0	\$267.5
97260	Reduction and Cleanup of Marine Pollution in Port Graham	ADFG	W. Meganack, Jr./Port Graham	New		\$616.5	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97283	Native Village of Eyak: Cordova Beach Cleanup and Restoration	ADEC	B. Henrichs/Native Village of	New		\$193.7	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97304	Kodiak Island Borough Master Waste Management Plan	ADEC	J. Selby/Kodiak Island Borough	New		\$336.7	Fund contingent	\$267.5	\$0.0	\$0.0	\$0.0	\$267.5
Habitat Improvement						\$879.6	\$892.4	\$662.6	\$759.6	\$0.0	\$0.0	\$1,422.2
97180	Kenai Habitat Restoration & Recreation Enhancement Project	ADNR	M. Rutherford/ADNR, M.	Cont'd	\$879.6	\$621.8	Fund contingent	\$594.8	\$759.6	\$0.0	\$0.0	\$1,354.4
97230	Valdez Duck Flats Restoration Project	ADNR	J. Winchester/PWSEDC	New		\$270.6	Fund contingent	\$67.8		\$0.0	\$0.0	\$67.8
Ecosystem Synthesis						\$673.1		\$55.0	\$0.0	\$0.0	\$0.0	\$55.0
97054-BAA	A Mass-balance Model of Trophic Fluxes in Prince William Sound	NOAA	D. Pauly/University of British	New		\$148.0	Do not fund	\$0.0				\$0.0
97215-BAA	Modeling Trophic Webs to Achieve Synthesis in SEA, NVP, and APEX Ecosystems	NOAA	S. Pimm/University of Tennessee	New		\$75.6	Do not fund	\$0.0				\$0.0
97234	Ecosystem Synthesis Model of EVOS Restoration Findings for Resource	NOAA	A. Hooten/Environmental	New		\$198.4	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97249	Ecosystem Synthesis and Modeling	NOAA	I. Show/SRA, Inc.	New		\$251.1	Do not fund	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

PRELIMINARY DRAFT OF EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 97 WORK PLAN

					Executive Director's Recommendation					
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request	FY97	FY98	FY99	Sum FY00-02 FY97-02
97300	Ecosystem Synthesis: Modeling and Communication Efforts			New			Fund	\$55.0		- \$55.0
Public Information and Education						\$2,737.6		\$100.0	\$0.0	\$0.0 \$0.0 \$100.0
97183	Placement of "Darkened Waters: Profile of an Oil Spill" in a Permanent,	ADFG	M. O'Meara/Pratt Museum	New			Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97221-BAA	Developing a Trustee Council Information Infrastructure	ADNR	L. Thomas/Mitretek Systems	New		\$214.0	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97232	Endowment of an Engineering Research Center at the University of Alaska	ADFG	G. Baker, H. Schroeder, C.	New		\$2,256.5	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97275	Rural Development Applied Field-Based Research Program in Oil Spill	ADFG	G. Pullar/UAF-College of Rural	New		\$161.4	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97301	The Alaska Laboratory Series Television Pilot	ADFG	G. Bolar/Alaska Public	New		\$105.7	Fund	\$100.0	\$0.0	\$0.0 \$0.0 \$100.0
Research Facilities						\$403.7		\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97171	Alaska Department of Fish and Game Mariculture Technical Center	ADFG	T. Rutz/ADFG,	New		\$271.8	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97238	Kachemak Bay Shellfish Nursery Culture Project	ADFG	M. Bradley/Kachemak Shellfish	New		\$82.1	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
97252	Investigations of Genetically Important Conservation Units of Species	ADFG	J. Seeb, L. Seeb/ADFG	New		\$49.8	Do not fund	\$0.0	\$0.0	\$0.0 \$0.0 \$0.0
Project Management						\$584.4		\$579.2		\$579.2
97250	Project Management		All Trustee Council Agencies	Cont'd		\$584.4	Fund	\$579.2		\$579.2
Total:					\$13,797.5	\$33,330.6		\$14,774.0	\$9,651.0	\$3,515.2 \$1,737.8 \$29,678.0

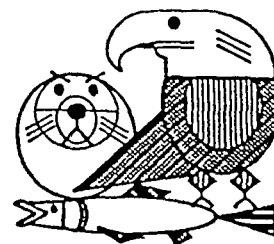
					Executive Director's Recommendation						
Proj. No.	Title	Lead Agency	Proposer	New or Cont'd	FY97 Estimate	FY97 Request	FY97	FY98	FY99	FY00-02	Sum FY97-02
Archaeological Resources						\$318.5	\$0.0	\$0.0	\$0.0	\$0.0	-\$0.0
97277	Archaeological Repository and Cultural Facility in Chenega Bay	USFS	C. Totemoff/Chenega	New	\$318.5	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Reduction of Marine Pollution						\$2,086.2	\$1,167.9	\$75.0	\$0.0	\$0.0	\$1,242.9
97115	Implementation of the Sound Waste Management Plan: Environmental	ADEC	P. Roetman/Prince William	New	\$1,167.9	Fund contingent	\$1,167.9	\$75.0	\$0.0	\$0.0	\$1,242.9
97229	City of Cordova - Solid Waste Disposal Site	ADEC	S. Janke/City of Cordova	New	\$918.3	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Habitat Improvement											
97126	Habitat Protection and Acquisition Support	ADNR	C. Fries/ADNR, D.	Cont'd		Fund					
Research Facilities						\$1,282.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97151-BAA	Facilities Improvement to the Prince William Sound Science Center	NOAA	G. Thomas/Prince William	New	\$537.6	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
97197	Alaska SeaLife Center Fish Pass	ADFG	J. Seeb/ADFG	New	\$745.1	Defer	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total:					\$3,687.4		\$1,167.9	\$75.0	\$0.0	\$0.0	\$1,242.9

Exxon Valdez Oil Spill Trustee Council

Public Advisory Group

645 G Street, Suite 401, Anchorage, Alaska 99501-3451

Phone 907-278-8012 Fax 907-276-7178



AGENDA

RECEIVED
MAR 14 1996

Exxon Valdez Oil Spill Trustee Council
Public Advisory Group
First floor conference room
645 G Street, Anchorage, Alaska

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

Wednesday, March 13, 1996
9:00 AM

DRAFT

DRAFT
3/11/96

PURPOSE:

1. Receive status report on restoration program
2. Invitation to Submit Restoration Proposals for Federal Fiscal Year 1997

Wednesday

9:00 AM	Call to order/roll call/ approval of agenda	Vern McCorkle, Chair
9:05	Approval of summary of December 6, 1995 PAG meeting	Vern McCorkle, Chair
9:10	Executive Director's Report • Habitat Protection • Audit • FY 97 Invitation • Legislative approval of state funds	Molly McCammon Executive Director
10:15	Break	
10:30	SWMP	George Keeney (Cordova) Bill Wilcox (Valdez) Chris Overbeck (Whittier) Chuck Totemoff (Chenega)

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation
United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

Wednesday - continued

11:00	Highlights of 1996 Restoration Workshop Review of Recovery Objectives	Stan Senner
12:00 PM	Lunch on your own	
1:00	Public Comment	
1:30	Status Report of Information Management Project PAG Information Subgroup	Carol Fries, ADNR Chris Beck
2:15	Report on Residual Oiling Conference	Ernie Piper, ADEC
3:00	Break	
3:15	Discussion of University Chairs	Jim King
4:00	1996 PAG field trip Upcoming PAG meetings	
4:15	Member Comments	
5:00	Adjourn	

Information Session Summary

A. GROUP: Exxon Valdez Oil Spill Public Advisory Group (PAG)

B. DATE/TIME: December 6, 1995

C. LOCATION: Anchorage, Alaska

D. MEMBERS IN ATTENDANCE:

Name

Rupert Andrews
Kim Benton
Nicole Evans for Pam Brodie
Chris Beck
Jim Diehl
John French
Brenda Schwantes
Thea Thomas
Chuck Totemoff
Martha Vlasoff
Gordon Zerbetz

Principal Interest

Sport Hunting and Fishing
Forest Products
Environmental
Public-at-Large
Recreation Users
Science/Academic
Subsistence
Commercial Fishing
Native Landowners
Public-at-Large
Public-at-Large

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TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

E. NOT REPRESENTED:

Name

Karl Becker
Dave Cobb
Chip Dennerlein
James King
Nancy Lethcoe
Vern McCorkle
Georgianna Lincoln (*ex officio*)
Alan Austerman (*ex officio*)

Principal Interest

Aquaculture
Local Government
Conservation
Public-at-Large
Commercial Tourism
Public-at-Large
Alaska State Senate
Alaska State House

F. OTHER PARTICIPANTS:

Name

Catherine Berg
L.J. Evans
Dave Gibbons
Carrie Holba
Bob Loeffler
Molly McCammon

Doug Mutter

Organization

Fish and Wildlife Service
Trustee Council Staff
U.S. Forest Service
Oil Spill Pub. Info. Cen.
AK Dept. Envir. Cons.
Trustee Council Executive
Director
Designated Fed. Officer
Dept. of Interior

Eric Myers
Bud Rice
Sandra Schubert
Stan Senner

Joe Sullivan
Craig Tillery

Ray Thompson
Cherri Womac

Trustee Council Staff
National Park service
Trustee Council Staff
Trustee Council Staff

AK Dept. Fish and Game
AK Dept. of Law, Trustee
Council Representative
U.S. Forest Service
Trustee Council Staff

G. SUMMARY:

The meeting was opened December 6 at 8:30 a.m. by John French, Vice Chairperson. Roll call was taken, a quorum was not present. No modifications were identified for the summary of the July 27, 1995 PAG meeting.

Martha Vlasoff resigned from the PAG due to a conflict of interest. She is now employed on a Trustee Council funded project as the Community Coordinator, working with communities in the spill area.

Molly McCammon provided the Executive Director's report. The Valdez to Chenega PAG field trip was a success, especially because an extra day was spent at Chenega thanks to Typhoon Oscar. Appreciation was extended to Chuck Totemoff and the residents of Chenega for their hospitality. The next field trip will probably be in May 1996 to the Kodiak or lower Kenai Peninsula Region.

The audit of Trustee Council and project expenditures is underway--a draft report is expected February 1, 1996, and a final is due March 1, 1996. Molly will meet shortly with the Court Registry Investment System (CRIS) and banking staff in Houston Texas, to discuss long-range investing for the reserve account. A Trustee Council financial report was mailed to PAG members.

In September a subsistence conference was held (see attachments #1 and 2). A residual oiling workshop was held in November, the report is under preparation. A seabird conference was held this fall in Girdwood, a report will be produced later. Technical sessions were held this fall on: clams, octopus, harlequin ducks, pink salmon, sockeye salmon, Apex predators, and herring. These sessions examined the state of knowledge and recovery, and what restoration activities should be pursued in the future. The annual restoration workshop is scheduled for January 16-18, 1996 at the Captain Cook Hotel. A January 19-20 review of the Prince William Sound SEA program will take place following the annual workshop. The results of these sessions will be used to help develop the FY 1997 Work Plan.

The Alaska Municipal League gave an award to the Sound Waste Management Project. The SeaLife Center project has met Trustee Council criteria for release of the previously approved funds. The Alaska Legislative Budget and Audit Committee has added a condition that all financing be secured for both the research and visitation components before Trustee funds can be expended--this should be done this spring. Further archaeological surveys will be conducted this winter.

McCammon outlined the status of habitat protection efforts with Koniag, Kodiak Island Borough, Chenega, Tatitlek, Afognak Joint Venture, Koniag Phase II, Kenai Fjords, and small parcels. The group discussed valuation of parcels for restoration purposes when land purchases/easements are made.

Chris Beck reported on the Ad Hoc Information Subgroup (see attachment #3). The focus of the subgroup is to improve communications with the general public. Chris asked if this was the direction the PAG thought it should go. The ensuing discussion brought up several ideas for consideration in increasing public knowledge of restoration results. A subgroup meeting is scheduled for January 10, 1996. (This meeting had to be rescheduled to this date because of a scheduling conflict.)

Craig Tillery discussed the last Trustee Council meeting and the actions taken. He noted that he was not receiving much feedback on issues, and encouraged the public to offer their comments and concerns. Some land appraisals have required additional work, he noted, slowing the habitat acquisition process. Chuck Totemoff voiced frustration with the slowness of the process relative to Chenega--Tillery agreed the process was too slow. Kim Benton asked if there was a way to recoup funds spent on flawed appraisals--Dave Gibbons stated that they were pursuing this. Tillery stated that the role of the PAG was on-going review of restoration work (e.g., suggesting budget priorities), reaction to policy questions (e.g., conservation easements policy), and being proactive with suggested policies (e.g., the creation of the reserve fund). The Trustee Council wants to hear minority views, not just consensus items. He asked the PAG to consider: advising where the shrinking dollars for science projects should go, passing information and feedback along to the Trustee Council as it comes to PAG members' attention, and being assertive and proactive on issues and ideas.

Stan Senner and Bob Loeffler discussed criteria for determining normal agency management (see attachment #5). They reported that it does not appear possible to develop hard and fast criteria, since much of the restoration work fits into agency authorities, by definition. Continued vigilance on the part of the PAG and Trustee Council is required to ensure that the Council is not funding work that should be funded by the Trustee agencies. McCammon noted that this question would be addressed in detailed project descriptions in the future.

A public comment period was opened at 11:00 a.m.; no comments were offered.

McCammon opened review of the FY 1996 Work Plan deferred projects (see attachments #6 and 7) discussion, noting that the Trustee Council would take action at their December 11, 1995 meeting. Loeffler and Senner summarized and answered questions about deferred projects in the following clusters: pink salmon cluster (Thea Thomas raised questions about the utility of some of the genetics projects versus the non-approved 96093C, an active restoration project--she will put her comments in writing for the December 11 Trustee Council meeting); Herring cluster (questions about diseases related to pound fisheries and the overall population health were discussed); Sound Ecosystem Assessment and related cluster; Sockeye Salmon cluster (Coghill Lake fertilization seems to be working, peer reviewers thought highly of the Kenai River work of Dana Schmidt); Cutthroat and Dolly Varden Trout cluster; Marine Mammal cluster; Nearshore Ecosystem cluster (almost no oil was found in the Kodiak Island survey); Seabird/Forage Fish cluster (Thomas raised a question about how many non-target species were killed when netting fish for studies); Subsistence cluster (Brenda Schwantes asked why there weren't more Kodiak projects funded); Archaeological cluster; Reducing

Marine Pollution cluster; Habitat Improvements cluster (Benton said the largest timber operator in the spill area was interested in sharing restoration information for protection of habitat); and Information Support cluster. McCammon noted at the PAG's urging, a policy was developed to not recommend projects if late reports were not submitted. This policy helped to get late reports completed.

McCammon discussed a long-term planning session with core peer reviewers. The core reviewers believe it is important to begin the integration and synthesis of the three major ecosystem studies. The hope is to identify key habitats and species for measuring long-term ecosystem health. She also mentioned that public meetings would be held in the Kodiak Island communities this spring, as well as in other spill area communities.

PAG members each voiced views and comments. After adjournment, PAG members were invited to the Oil Spill Public Information Center to view the EVOS and SEA Program Internet Home Pages.

The meeting adjourned at 2:30 p.m.

H. FOLLOW-UP:

1. McCammon and Mutter will pursue a replacement PAG member to fill Vlasoff's seat.
2. Chris Beck and the Ad Hoc Information Subgroup will meet at 10:00, January 10, 1996 at the Trustee Council offices.
3. L.J. Evans will put PAG member names and phone numbers in the next issue of the restoration newsletter.
4. The PAG should continue to monitor projects for normal agency management issues.
5. French will present PAG recommendations at the December 11 Trustee Council meeting.
6. PAG members are invited to participate in the annual Restoration Workshop in January.

I. NEXT MEETINGS:

- Ad Hoc Information Subgroup meeting: January 10, 1996
- Annual Restoration Workshop: January 16-18, 1996
- PAG meeting: March 13-14, 1996
- PAG field trip: (in May, to be determined)
- PAG meeting: June 5-6, 1996
- PAG meeting: July 31-August 1, 1996

J. ATTACHMENTS: (for those not present)

1. Summary Report: Community conference on Subsistence and the Oil Spill
2. Memorandum from the Executive Director regarding follow-up actions pursuant to the subsistence conference.
3. Memorandum from Chris Beck on the Ad Hoc Information Subgroup
4. Community Involvement Report from Martha Vlasoff
5. Memorandum from Bob Loeffler and Stan Senner regarding normal agency management criteria
6. Draft Summary of Executive Director's Recommendation, FY 1996 Work Plan
7. Draft Executive Director's Recommendation: Deferred Project/FY 96 Work Plan (summary and detailed tables)

K. CERTIFICATION:

PAG Chairperson

Date

RESOLUTION OF THE EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

RECEIVED
MAR 1 1993
EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

We, the undersigned, duly authorized members of the Exxon Valdez Oil Spill Trustee Council, after extensive review and after consideration of the views of the public, find as follows:

1. The Eyak Corporation ("Eyak"), owns the surface estate of, or has valid prioritized selections on, lands in the Chugach National Forest ("Forest"), which include parcels known as Power Creek, Eyak River, and Eyak Lake (together "the Core Lands"), consisting of approximately 11,200 acres, and generally depicted on Exhibit A. The reduction in acreage from prior descriptions of the Core Lands contained in previous analysis and resolutions of the Trustee Council, which consisted of approximately 13,700 acres, is due in part to the removal by Eyak of three parcels of land for future development. Sherstone, Inc. ("Sherstone") is a wholly-owned subsidiary of Eyak that holds timber rights on the Core Lands. These lands were selected and conveyed pursuant to the Alaska Native Claims Settlement Act. The subsurface rights associated with these lands are held by Chugach Alaska Corporation.

2. These lands are within the oil spill area as defined by the Trustee Council in the Final Restoration Plan.

3. Eyak and Sherstone have recently indicated an intent to

develop the Core Lands through logging operations commencing on March 15, 1996. Eyak and Sherstone have also indicated a desire to sell the Core Lands in fee simple to the United States as part of the Trustee Council's program for restoration of the natural resources and services that were injured by the Exxon Valdez Oil Spill ("EVOS").

4. The Core Lands include important habitat for various species of fish and wildlife for which significant injury resulting from the spill has been documented. The Trustee Council's habitat acquisition analysis indicates the Core Lands have high value to benefit such injured natural resources as sockeye salmon, cutthroat trout, Dolly Varden, and river otters, as well as a high restoration value for recreational use. Eyak Lake and Power Creek provide major spawning and rearing habitat for sockeye salmon, cutthroat trout and Dolly Varden. Annual sockeye escapement into Eyak Lake is estimated at 15,000 to 25,000 fish; most spawning occurs along the lakeshore. Eyak River is a major migration corridor for anadromous fish and supports major commercial, recreational, and subsistence fisheries. River otters use the Core Lands for feeding and denning. Acquisition of the Core Lands will benefit fish and waterfowl and the services they support primarily

by protecting the watershed from activities such as logging that may adversely affect water quality and quantity in Power Creek and Eyak Lake. Because Eyak Lake is shallow, it is particularly sensitive to possible eutrophication resulting from lake shore development. Protection of the land surrounding the lake will limit the risk of this occurrence. The Core Lands also have high scenic value because they are visible from the Copper River Highway; acquisition will preserve this scenic quality. The area is accessible by road and trail and receives high use by residents of Cordova for fishing, hunting, and plant gathering. Because of its proximity to Cordova and road access, there is a significant likelihood that development could occur on these lands. Although the size of the Core Lands has been reduced somewhat because Eyak has chosen to retain some areas, the Trustee Council finds that the remaining acreage retains significant attributes that will promote the restoration of injured resources.

5. Existing laws and regulations, including but not limited to the Alaska Anadromous Fish Protection Act, the Clean Water Act, the Alaska Coastal Management Act, the Bald Eagle Protection Act, and the Marine Mammal Protection Act, are intended, under normal circumstances, to protect resources from serious adverse effects

from activities on the Lands. However, restoration, replacement, and enhancement of natural resources, and acquisition of equivalent resources and services injured, lost or reduced as a result of the EVOS present a unique situation. Without passing judgment on the adequacy or inadequacy of existing law and regulations to protect resources, biologists, other scientists, and other resource specialists agree that, in their best professional judgment, protection of habitat in the spill area to levels above and beyond that provided by existing laws and regulations will likely have a beneficial effect on recovery of injured resources and lost or reduced services provided by these resources.

6. There is widespread public support for the acquisition of the Core Lands.

7. The purchase of the Core Lands is an appropriate means to restore a portion of the injured resources and reduced services in the oil spill area. Acquisition of these lands is consistent with the Final Restoration Plan.

8. It is ordinarily the Federal Government's practice to purchase property based on a value determined through a fair market value appraisal for the land interests to be acquired. Although a fair market value appraisal has not been completed, the United

States has procured a draft appraisal for the underlying land value and a preliminary estimate of value of the timber located on a portion of the Core Lands. The combined initial estimate of value of the Core Lands is between \$2.9 to \$3.9 million.

9. Fair market value is an economic concept and does not reflect the benefits of the acquisition to the restoration of the injured natural resources. The habitat analyses prepared for the Trustee Council demonstrate that there is a need to acquire these lands promptly to promote the recovery of the injured natural resources by preventing any potential degradation of the habitat resulting from development. Furthermore, the United States has no authority to acquire these lands from the seller except on the basis of a mutually negotiated purchase price. Based on prior negotiations with Eyak and Sherstone, the Trustee Council believes that the initial estimate of fair market value is not an acceptable purchase price to Eyak and Sherstone. Accordingly, we find that it is appropriate to pay more than the initial estimate of fair market value for the Core Lands in order to obtain the resulting benefits for the restoration program.

THEREFORE, we supersede our resolution of December 2, 1994, related to Eyak and Sherstone land and timber interests and all

other Trustee Council offers. We resolve to authorize funding for an offer to purchase the Core Lands in fee simple and to provide the funds, if the offer is accepted, in the amount set forth below for the United States, acting through the Forest Service, to enter into appropriate agreements in conformity with applicable Federal and State law to purchase and acquire the interests. Such agreements shall contain and are subject to the following conditions and terms:

(a) fee simple acquisition of the land identified in Exhibit A. The offered purchase price for the interests in the Core Lands shall be \$7 million. This offer represents the lump-sum payment price. Because of the installment payment schedule provided for in the Exxon settlement agreement and the resulting limited availability of funds, an offer that reflects a value that provides Eyak and Sherstone a benefit for selling their interests in these lands over the course of several years will be considered by the Trustee Council if Eyak and Sherstone prefer such method of payment. The amount of this benefit will depend on the payment schedule agreed to by the parties. If an interim approved appraisal determines the fair market value of the Core Lands is more than \$7 million, the Trustee Council will consider a new offer

for the Core Lands. For purposes of this resolution, the interim approved fair market value appraisal shall be considered the final approved appraisal. This offer is valid until withdrawn by the Trustee Council or the date on which timber harvesting operations begin on the Core Lands.

(b) receipt by the United States District Court for the District of Alaska ("District Court") of the settlement payments due from Exxon Corporation, et al;

(c) disbursement of these funds by the District Court;

(d) completion of a satisfactory title search;

(e) no pre-closing development on the Core Lands;

(f) approval by the shareholders of Eyak and Sherstone for the sale of the interests in the Core Lands;

(g) Congressional review to the extent required with respect to acquisitions by the Forest Service pursuant to House Report No. 102-116;

(h) completion of a satisfactory hazardous substances survey;

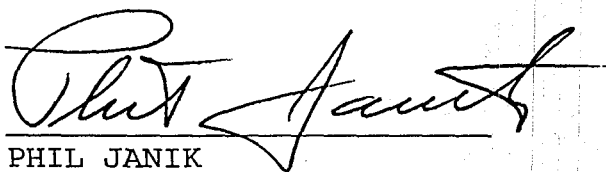
(i) satisfactory compliance with the National Environmental Policy Act and other applicable state and federal law.

(j) Eyak and Sherstone agree to continue to negotiate in good faith with the Forest Service and the State of Alaska regarding the

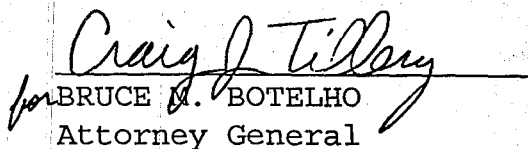
acquisition of other land interests that have high value for purposes of restoration.

By unanimous consent, and upon execution of the purchase agreements and written notice from the Forest Service and the State of Alaska to the Executive Director of the Exxon Valdez Oil Spill Trustee Council that the terms and conditions set forth herein and in the purchase agreements have been satisfied, we request the Alaska Department of Law and the Assistant Attorney General of the Environment and Natural Resources Division of the U.S. Department of Justice to petition the District Court for withdrawal of the appropriate sum to be paid at closing from the District Court Registry account established as a result of the Governments' settlement. The appropriate sum is \$7 million if a lump-sum purchase is made. The sum of the installment payments is authorized for withdrawal if an installment payment schedule is agreed to by the parties. The lump-sum payment or the sum of the installment payments are the only amounts due under this resolution to Eyak and Sherstone by the United States or the State of Alaska from the joint funds in the District Court Registry, and no additional amounts are herein authorized to be paid to Eyak and Sherstone from such joint funds.

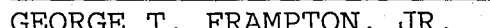
Dated this 29th day of February, 1996, at Juneau and Anchorage,
Alaska.



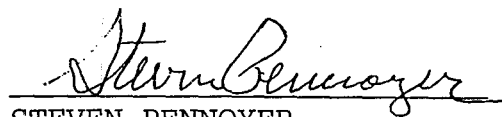
PHIL JANIK
Regional Forester
Alaska Region
USDA Forest Service



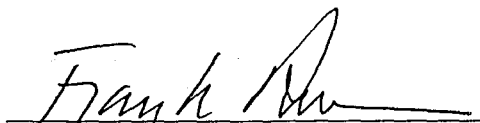
BRUCE M. BOTELHO
Attorney General
State of Alaska



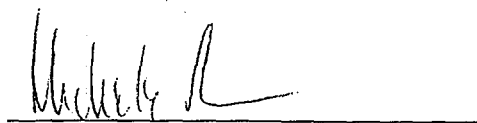
GEORGE T. FRAMPTON, JR.
Assistant Secretary for
Fish & Wildlife and Parks
U.S. Department of the Interior



STEVEN PENNOYER
Director, Alaska Region
National Marine Fisheries
NOAA



FRANK RUE
Commissioner
Alaska Department of
Fish and Game



MICHELE BROWN
Commissioner
Alaska Department of
Environmental Conservation

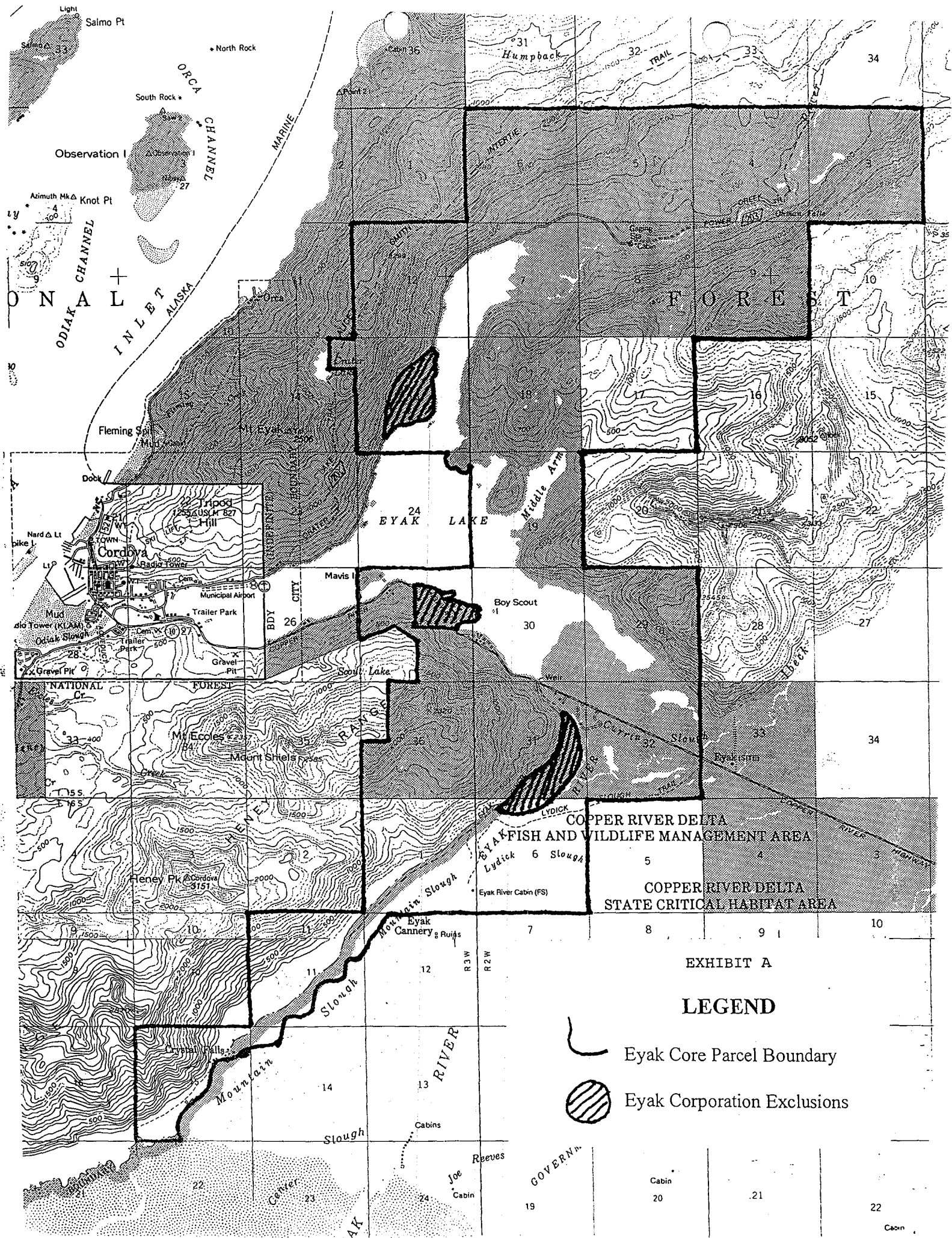


EXHIBIT A

LEGEND

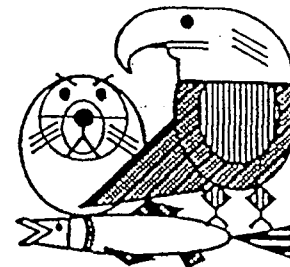
-  Eyak Core Parcel Boundary
-  Eyak Corporation Exclusions

Exxon Valdez Oil Spill Trustee Council

Restoration Office

645 "G" Street, Anchorage, AK 99501

Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

TO: Trustee Council

THROUGH: Molly McCammon
Executive Director

FROM: *Traci Cramer*
Traci Cramer
Administrative Officer

RECEIVED
MAR 1 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

DATE: February 26, 1996

RE: Financial Report as of January 31, 1996

Attached is the Statement of Revenue, Disbursements and Fees, and accompanying notes for the *Exxon Valdez* Joint Trust Fund for the period ending January 31, 1996.

The following is a summary of the information incorporated in the notes and contained on the statement.

Joint Trust Fund Account Balance	\$102,266,723	
Less: Current Year Commitments (Note 5)	\$24,456,000	
Less: Restoration Reserve Balance (Note 6)	\$36,000,000	
Plus: Adjustments (Note 7)	<u>\$432,337</u>	
Uncommitted Fund Balance		\$42,243,060
Plus: Future Exxon Payments (Note 1)	\$420,000,000	
Less: Remaining Reimbursements (Note 3)	23,300,000	
Less: Remaining Commitments (Note 8)	<u>\$36,091,667</u>	
Total Estimated Funds Available		\$402,851,393

If you have any questions regarding the information provided please give me a call at 586-7238.

attachments

cc: Restoration Work Force
Bob Baldauf

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation
United States: National Oceanic & Atmospheric Administration, Departments of Agriculture and Interior

NOTES TO THE STATEMENT OF REVENUE, DISBURSEMENTS AND FEES
FOR THE EXXON VALDEZ JOINT TRUST FUND
As of January 31, 1996

1. Contributions - Pursuant to the agreement Exxon is to pay a total of \$900,000,000.

Received to Date	\$480,000,000
Future Payments	\$420,000,000

2. Interest Income - In accordance with the MOA, the funds are deposited in the United States District Court, Court Registry Investment System (CRIS). All deposits with CRIS are maintained in United States government treasury securities with maturities of 100 days or less. Total earned since the last report is \$383,970.
3. Reimbursement of Past Costs - Under the terms of the agreement, the United States and the State are reimbursed for expenses associated with the spill. The remaining reimbursements represents that amount due the State of Alaska.
4. Fees - CRIS charges a fee of 10% for cash management services. Total paid since the last report is \$42,663.
5. Current Year Commitments - Includes \$12,456,000 for the Alaska SeaLife Center and the following land payments.

<u>Seller</u>	<u>Amount</u>	<u>Due</u>
Koniag, Incorporated	\$4,500,000	September 1996
Akhiok-Kaguyak	\$7,500,000	September 1996

6. Restoration Reserve - The total in the Restoration Reserve is \$36,000,000.
7. Adjustments - Under terms of the Agreement, both interest earned on previous disbursements and prior years unobligated funding or lapse are deducted from future court requests. Unreported interest and lapse is summarized below.

	<u>Interest</u>	<u>Lapse</u>
United States	\$0	
State of Alaska	\$432,337	

8. Remaining Commitments - Includes the following land payments.

<u>Seller</u>	<u>Amount</u>	<u>Due</u>
Seal Bay	\$3,091,667	November 1996
Akhiok-Kaguyak	\$7,500,000	September 1997
Koniag, Incorporated	\$9,000,000	September 1997 and 1998
Koniag, Incorporated	\$16,500,000	September 2002

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Trustee Agencies

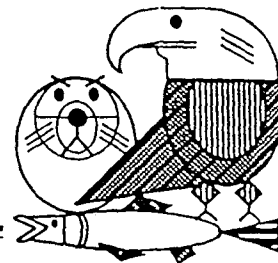
State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation
United States: National Oceanic & Atmospheric Administration, Departments of Agriculture and Interior

Exxon Valdez Oil Spill Trustee Council

Restoration Office

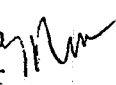
645 G Street, Suite 401, Anchorage, Alaska 99501-3451

Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

TO: Trustee Council Members

FROM: Molly McCammon 
Executive Director

DATE: February 26, 1996

RE: Quarterly Project Status Summary -- December 31, 1995

RECEIVED
MAR 1 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

Attached is the *Exxon Valdez Oil Spill Project Status Summary* for the quarter ending December 31, 1995, for all projects funded by the Trustee Council during 1992, 1993, 1994, 1995, and 1996. The Summary focuses on the status of project reports, and includes progress updates for FY 95 and FY 96 projects.

As of December 31, 1995, a total of 94 project reports had been accepted by the Chief Scientist. Once accepted by the Chief Scientist, reports are submitted to the Oil Spill Public Information Center (OSPIC) where they are reviewed for proper technical formatting and then made available to the public. As of December 31, 1995, 46 reports were available to the public through OSPIC and other libraries around the state. (See Attachment C for a list of libraries, and a list of reports available as of today). An additional 23 reports were undergoing formatting review at OSPIC.

This memorandum summarizes the status of reports for each project year. Attachment A summarizes the status of 1992, 1993 and 1994 reports by agency. Attachment B lists the reports that are significantly behind schedule. Reports are considered significantly behind schedule if they have either (1) not yet been submitted to the Chief Scientist, or (2) were reviewed by the Chief Scientist, returned to the PI for revision longer ago than six months, and have not been revised and resubmitted to the Chief Scientist.

Status of FY 92 Project Reports as of December 31, 1995

A total of 60 projects were funded in the 1992 Work Plan. With very few exceptions, a final report -- that is, a report that is subject to peer review and approval by the Chief Scientist -- is required on each 1992 project. Some projects require more than one report. (NOTE: Reports "in progress" are in peer review, are under revision by the PI in response to peer reviewer comments, or have been revised and are undergoing a second review by the Chief Scientist.)

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation
United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

<u>Total Number of Reports</u>	<u>Reports Accepted by Chief Scientist</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
75	58	15	2
Status as of September 30, 1995 77	55	19	3

Status of FY 93 Project Reports as of December 31, 1995

A total of 37 projects were funded in the 1993 Work Plan. With some exceptions, a final report is required on each 1993 project. Some projects require more than one report.

<u>Total Number of Reports</u>	<u>Reports Accepted by Chief Scientist</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
30	18	10	2
Status as of September 30, 1995 30	16	9	5

Status of FY 94 Project Reports as of December 31, 1995

A total of 42 projects were funded in the 1994 Work Plan. Beginning with the 1994 project year, "multi-year" projects that receive Trustee Council funding in consecutive years are required to submit an "annual" report each year until the project is complete, at which point a "final" report is required. The annual report, although subject to peer review, need not be rewritten in response to peer review comments. Rather, the peer review comments are to be used to guide future work on the project. Annual reports are available to the public through OSPIC, and state on their front covers that "peer review comments have not been addressed in this report."

<u>Total Number of Reports</u>	<u>Reports Accepted by Chief Scientist</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
38	16	19	3
Status as of September 30, 1995 37	5	16	16

Status of FY 95 Projects as of December 31, 1995

Reports on projects funded in the 1995 Work Plan are due April 15, 1996, unless other arrangements have been made with the Restoration Office. The *Invitation to Submit Restoration Proposals for FY 97* clearly states that FY 97 proposals will not be reviewed for any principal investigator who has an overdue report. Information provided by the agency liaisons indicates that report writing is currently underway for virtually all 1995 projects.

Status of FY 96 Projects as of December 31, 1995

The December quarter was the "start up" quarter for most of the projects funded in the 1996 Work Plan. Nearly all projects are on schedule, with activities focused primarily on obtaining NEPA (National Environmental Protection Act) compliance documentation and necessary permits, awarding contracts for those projects being implemented by non-Trustee organizations, and analyzing data from the summer field season. A community involvement coordinator and local facilitators in nine communities have been hired under contract with the Alaska Department of Fish and Game (Project 96052), local technicians have been trained to collect biological samples from harbor seals (Project 96244), and Prince William Sound youth have begun participating in restoration projects (Project 96210).

Conclusion

Significant progress continues to be made toward the goal of making the results of studies funded by the Trustee Council available to the public through project reports. In total, 143 reports will be produced for projects funded in 1992, 1993, and 1994. As of December 31st, 94 of these reports had been accepted by the Chief Scientist and only 7 had not yet been submitted for peer review. Perhaps more importantly, 46 reports are now available to the public through OSPIC -- last year at this time no reports were available to the public. This represents a substantial effort on the part of the PIs, the Chief Scientist, and the agencies.

In addition to project reports, we are continuing to encourage principal investigators to publish the results of their work in peer reviewed journals. We are working with the Chief Scientist and interested investigators to develop a report format that will allow a manuscript prepared for publication to also meet at least a portion of the Trustee Council's report writing requirements. In addition, we are in the process of creating a bibliography of articles published to date as a result of Council-funded research.

ATTACHMENT A

Summary of Project Report Status as of December 31, 1995

1992 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Peer Rev'd/ Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	2	0	0	2	2
ADFG	26	1	8	17	12
ADNR	1	0	0	1	0
DOI	33	0	5	28	10
NOAA	11	1	2	8	1
USFS	2	0	0	2	0
TOTAL	75	2	15	58	25

1993 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Peer Rev'd/ Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	2	0	1	1	1
ADFG	13	1	5	7	6
ADNR	0	0	0	0	0
DOI	10	1	3	6	3
NOAA	3	0	1	2	1
USFS	2	0	0	2	1
TOTAL	30	2	10	18	12

1994 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Peer Rev'd/ Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	1	1	0	0	0
ADFG	20	1	12	7	0
ADNR	2	1	0	1	0
DOI	6	0	2	4	2
NOAA	5	0	2	2	5
USFS	4	0	3	2	2
TOTAL	38	3	19	16	9

ATTACHMENT B
Summary of Reports Significantly Behind Schedule as of February 22, 1996

Agency	Project Number	PI	Final or Annual	Project Title	Status of Report
DOI	93006	Birkedahl	Final	Site specific archaeology	Never submitted. Expect 3/96.
ADFG ADFG	FS01 R071	Fried & Bue Rothe	Final Final	Spawning area injury Breeding ecology of harlequins	Never submitted. Returned to PI 5/22/95. Expect 3/1/96.
ADFG ADFG	93033-2 94320D	Rothe L. Seeb	Final Annual	Harlequin duck restoration Pink salmon genetics	Waiting for Fry's analysis; 2 yrs. overdue. Never submitted. PI has requested combine with '95 findings and submit 4/15/96.
NOAA NOAA	CH1B ST8	Babcock Short	Final Final	Hydrocarbons in mussels and sediments Sediment data synthesis	Returned to PI 5/8/95. Expect 3/1/96. Never submitted. Agreed to delayed date of 12/31/95. PI has indicated he will request further delay.
DEC	94266	Munson	Final	Shoreline assessment	Never submitted. New PI. Expect 3/29/96.

OIL SPILL PUBLIC INFORMATION CENTER

645 G Street
Anchorage, AK 99501
(907) 278-8008
(907) 265-9359 fax
1-800-478-7745 Alaska
1-800-283-7745 outside Alaska

**Final Reports
January 1996**

Attached is a list of published final reports for Natural Resource Damage Assessment Studies and Restoration Projects. Copies of these reports may be checked out from the Oil Spill Public Information Center. Copies are also available for viewing at the following libraries:

A. Holmes Johnson Library - Kodiak
Alaska Historical Library - Juneau
Alaska Resources Library - Anchorage
Alaska State Library - Juneau
Alaska Department of Environmental Conservation Library - Juneau
Alaska Department of Fish and Game Habitat Library - Anchorage
Auke Bay Fisheries Lab Library - Juneau
Cordova Public Library - Cordova
E.E. Rasmusson Library - University of Alaska, Fairbanks
Fairbanks North Star Borough Library - Fairbanks
Kenai Community Library - Kenai
Ketchikan Public Library - Ketchikan
Kuskokwim Consortium Library - Bethel
Library of Congress - Washington, D.C.
National Library of Canada - Ottawa
Northwest Community College Learning Resource Center - Nome
Tuzzy Consortium Library - Barrow
University of Alaska, Anchorage Consortium Library - Anchorage
University of Alaska, Southeast Library - Juneau
University of Washington Library - Seattle
U.S. Fish and Wildlife Service Library - Anchorage
Valdez Consortium Library - Valdez
Z.J. Loussac Library - Anchorage

Copies of the final reports may be purchased from the following:

Anchorage Copy Centers:

Clay's Printing - (907) 561-6270

TimeFrame - (907) 562-3822

National Technical Information Service (NTIS) - (703) 487-4650

FINAL REPORTS

January 1996

Natural Resource Damage Assessment Studies

* = new additions to this list.

Air/Water 3 (Subtidal 3A)

Short, J.W. and P. Rounds. 1995. Petroleum hydrocarbons in near-surface seawater of Prince William Sound, Alaska, following the Exxon Valdez oil spill II: analysis of caged mussels, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Air/Water Study Number 3, Subtidal Study Number 3A), National Oceanic and Atmospheric Administration, Juneau, Alaska.

Fish/Shellfish 4

Wertheimer, A.C., A.G. Celewycz, M.G. Carls, and M.V. Sturdevant. 1994. Impact of the oil spill on juvenile pink and chum salmon and their prey in critical nearshore habitats, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 4, NMFS Component), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

Fish/Shellfish 4A

Willette, T.M., G. Carpenter, P. Shields, and S.R. Carlson. 1994. Early marine salmon injury assessment in Prince William Sound, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 4A), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska.

Fish/Shellfish 7B and 8B

Swanton, C.O., T.J. Dalton, B.M. Barrett, D. Pengilly, K.R. Brennan, and P.A. Nelson. 1993. Effects of pink salmon (*Oncorhynchus gorbuscha*) escapement level of egg retention, preemergent fry, and adult returns to the Kodiak and Chignik management areas caused by the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 7B and 8B), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Kodiak, Alaska.

Fish/Shellfish 18

Haynes, E., T. Rutecki, M. Murphy, and D. Urban. 1995. Impacts of the Exxon Valdez oil spill on bottomfish and shellfish in Prince William Sound, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 18), U.S. National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

Fish/shellfish 22

Freese, J.L. and C.E. O'Clair. 1995. Injury to crabs outside Prince William Sound, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 22), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

Fish/Shellfish 27

Schmidt, D.C., K.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. Kind, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 27), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Soldotna, Alaska.

Fish/Shellfish 30

DiCostanzo, C. and B.P. Simonson. 1993. Database management, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 30), Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau, Alaska.

Marine Mammal 5 (Restoration Study 73)

Frost, K.J. and L.F. Lowry. 1994. Assessment of injury to harbor seals in Prince William Sound, Alaska, and adjacent areas following the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 5, Restoration Study Number 73), Alaska Department of Fish and Game, Wildlife Conservation Division, Fairbanks, Alaska.

Marine Mammal 6-1

Ballachey, Brenda. 1995. Biomarkers of damage to sea otters in Prince William Sound, Alaska following potential exposure to oil spilled from the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report

(Marine Mammal Study Number 6-1), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-5

Bodkin, J.L. and M.S. Udevitz. 1995. An intersection model for estimating sea otter mortality from the Exxon Valdez oil spill along the Kenai Peninsula, Alaska, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-5), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-7

DeGange, A.R., D.C. Douglas, D.H. Monson, and C.M. Robbins. 1995. Surveys of sea otters in the Gulf of Alaska in response to the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-7), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-9

Doroff, A.M., and A.R. DeGange. 1995. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-9), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-12

Monnett, C. and L.M. Rotterman. 1992. Movements of weanling and adult female sea otters in Prince William Sound, Alaska after the T/V Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-12), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-13

Monnett, C. and L.M. Rotterman. 1992. Mortality and reproduction of female sea otters in Prince William Sound, Alaska, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-13), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-14

Monnett, C. and L.M. Rotterman. 1992. Mortality and reproduction of sea otters oiled and treated as a result of the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-14), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-18

Rotterman, L.M. and C. Monnett. 1991. Mortality of sea otter weanlings in eastern and western Prince William Sound, Alaska, during the winter of 1990-91, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-18), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-19

Udevitz, M.S., J.L. Bodkin, and D.P. Costa. 1995. Detection of sea otters in boat-based surveys of Prince William Sound, Alaska, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-19), U.S Fish and Wildlife Service, Anchorage, Alaska.

Restoration Study 47

Kuwada, M.N., and K. Sundet. 1993. Stream Habitat assessment project: Afognak Island, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Restoration Study 47), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

Restoration Study 60C

Sharr, S., J.E. Seeb, B.G. Bue, A. Craig, and G.D. Miller. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Restoration Study 60C), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Anchorage, Alaska.

Restoration Study 102

Highsmith, R.C., M.S. Stekoll, P.G. van Tamelen, A.J. Hooten, L. Deysher, L. McDonald, D. Strickland, and W.P. Erickson. 1993. Herring Bay experimental and monitoring studies, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Restoration Study 102), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

Restoration Study 106

McCarron, S. and A.G. Hoffman. 1993. Technical support study for the restoration of Dolly Varden and cutthroat trout populations in Prince William Sound, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Restoration Study 106), Alaska Department of Fish and Game, Division of Sport Fish, Anchorage, Alaska.

Subtidal 1B

Braddock, J.F., B.T. Rasley, T.R. Yeager, J.E. Lindstrom, and E.J. Brown. 1992. Hydrocarbon mineralization potentials and microbial populations in marine sediments following the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Subtidal Study Number 1B), University of Alaska Fairbanks, Fairbanks, Alaska.

Subtidal 2B/Air Water 2

Feder, H.M. 1995. Injury to deep benthos. Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report, (Subtidal Study 2B/Air Water 2), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

Subtidal 3B

Sale, D.M., J.C. Gibeaut and J.W. Short. 1995. Nearshore transport of hydrocarbons and sediments following the Exxon Valdez oil spill, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Subtidal Study Number 3B), Alaska Department of Environmental Conservation, Juneau, Alaska.

Subtidal 5

Trowbridge, Charles. 1992. Injury to Prince William Sound spot shrimp, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Subtidal Study Number 5), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Anchorage, Alaska.

Subtidal 6 (Fish/Shellfish 17)

Hoffmann, A. and P. Hansen. 1994. Injury to demersal rockfish and shallow reef habitats in Prince William Sound, 1989-1991, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Subtidal Study Number 6, Fish/Shellfish 17), Alaska Department of Fish and Game, Division of Sport Fish, Anchorage, Alaska.

Restoration Projects

* = new additions to this list.

93003

Sharr, S., J.E. Seeb, G.B. Bue, A. Craig, G.D. Miller. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93003), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska.

93017

Miraglia, R.A. 1995. Subsistence Restoration Project, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93017), Alaska Department of Fish and Game, Division of Subsistence, Anchorage, Alaska.

93034

Sanger, G.A. and M.B. Cody. 1994. Survey of pigeon guillemot colonies in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93034), U.S Fish and Wildlife Service, Anchorage, Alaska.

93045

Agler, B.A., P.E. Seiser, S.J. Kendall, and D.B. Irons. 1994. Marine bird and sea otter population abundance of Prince William Sound, Alaska: trends following the T/V Exxon Valdez oil spill, 1989-93, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93045), U.S Fish and Wildlife Service, Anchorage, Alaska.

93047 (Subtidal Study 2A)

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AD	Administrative Director's Office	ALL	No report required.		
ARC1	Archaeological Survey	ADNR	Final report accepted by OSPIC; copies currently being made.	Reger, D.R., J.D. McMahon, and C.E. Holmes. 1992. Effect of crude oil contamination on some archaeological sites in the Gulf of Alaska, 1991 investigations. Four archaeological sites from which adequate collections and radiocarbon samples were obtained were sampled for sediments to test for presence of oil. Two sediment samples (Shuyak Island and Chenega Island) tested positive for oil. None of the sites yielded radiocarbon dates which appear to be significantly skewed from the expected age range. The results of the study show that reasonable dates can be obtained from the test sites despite presence of oil remains on the beach surface or in the case of two sites from within the cultural deposits. The results of the study are applicable to the sites studied and useful for management decisions based on broad general conclusions.	
AW1	Surface Oil Maps	ADEC	Project terminated.	DEC/NOAA overflight charts stored in Alaska Archives.	
B02	Boat Surveys	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage. Populations of 9 species or species groups (black oystercatcher, pigeon guillemot, cormorants, harlequin duck, loons, scoters, newgull, arctic tern, northwestern crow) declined more than expected in the oiled zone of Prince William Sound suggesting an oil effect. Most injured species were ecologically tied to intertidal or nearshore areas.	Continued as 93045 and 94159.

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B03	Murres Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Nysewander, D.R., C.H. Dippel, G.U. Byrd and E.P. Knudtson. 1993. Effects of the T/V Exxon Valdez oil spill on murre: A perspective from observations at breeding colonies. U.S. Fish and Wildlife Service. Homer. Numbers were reduced, nesting was delayed, and productivity rates were far below normal at major colonies within the spill trajectory. Reproductive success improved slightly in 1991.	Related to R11, 93022 and 94039.
B04	Eagles Damage Assessment Closeout	DOI	Final report accepted by OSPIC; copies currently being made.	Bauman, T.D., P.F. Schempf, and J.A. Bernatowicz. 1994. Effects of the Exxon Valdez oil spill on bald eagles. U.S. Fish and Wildlife Service. Anchorage. Reproductive success of Prince William Sound bald eagles was significantly impaired in 1989, and nest failures were correlated with the distribution of crude oil on beaches. Although estimated direct mortality throughout the spill area was relatively large (about 300 - 900 eagles), no change in the population could be detected due to wide variation in population counts. The Prince William Sound eagle population was expected to return to its prespill level by 1993.	
B06	Marbled Murrelets Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Kuletz, K.J. 1994. Marbled murrelet abundance and breeding activity at Naked Island, Prince William Sound, and Kachemak Bay, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage. The marbled murrelet population at a site within the path of the oil (Naked Island) was lower in 1989 than in prespill years, but returned to normal in 1990. Murrelet numbers in Kachemak Bay where oiling was minimal did not change following the spill.	Related to R15, 93051B and 94102.

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B07	Storm Petrels Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Nishimoto, M. and G.U. Byrd. 1994. Effects of oil from the T/V <i>Exxon Valdez</i> spill on fork-tailed storm petrels breeding in the Barren Islands, Alaska. U.S. Fish and Wildlife Service. Homer. At the largest storm-petrel colony within the spill trajectory (Barren Islands), no evidence of adverse effects to breeding petrels was found. Burrow occupancy rates were above average, nesting chronology was not delayed, and productivity was normal.	
B08	Kittiwakes Damage Assessment Closeout	DOI	REPORT OVERDUE. [NOTE: Redraft of report submitted to Chief Scientist February 13, 1996; under peer review.]	Irons, D.B. 1994. Effects of the <i>Exxon Valdez</i> oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage. The number of breeding pairs did not decline at colonies in the oiled area of Prince William Sound but reproductive success in 1989 was less than expected, apparently due to low hatching success. Reproductive success did not recover by 1992 but whether the decline was due to the spill is unknown.	TS1
B09	Pigeon Guillemots Damage Assessment Closeout	DOI	Final report accepted by OSPIC; copies currently being made.	Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Anchorage. The population at a major breeding site within the spill trajectory (Naked Island) declined by 50% compared to 1972-1973 levels. A long-term decline within Prince William Sound predated the spill and, therefore, the decline at naked Island could not be attributed totally to the spill. Reproduction was largely normal following the spill.	93034 and 94173

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B11	Harlequin Ducks Damage Assessment Closeout	ADFG	Redraft of report peer reviewed; returned to PI for revision November 22, 1994. [NOTE: Peer reviewed; returned to PI for revision February 13, 1996.]	New statistical analysis of bile results indicates elevated hydrocarbon concentrations in western Prince William Sound and Kodiak birds, but also in eastern Prince William Sound birds, compared to Juneau samples. Concentrations correlate positively with proximity to the spill origin.	Project conducted in conjunction with R71 and continued as 93033. Also related to B2, CH1B, TS1, R103, and 93036.
B12	Shorebirds Damage Assessment Closeout	DOI	The results of this project will be presented in two reports: (1) Report on migrant shorebirds accepted by Chief Scientist. Not yet available at OSPIC. (2) Final report on black oystercatchers accepted by OSPIC; copies currently being made.	(1) Martin, P.D. 1993. Effects of the <i>Exxon Valdez</i> oil spill on migrant shorebirds using rocky intertidal habitats of Prince William Sound, Alaska, during Spring 1989. U.S. Fish and Wildlife Service, Anchorage. (2) Andres, B.A. 1994. The effects of the <i>Exxon Valdez</i> oil spill on black oystercatchers breeding in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage. (1) Spring migrant shorebirds (surfbirds and black turnstones) escaped impacts because shorelines used by these species (particularly around Montague Island) were largely unoiled. (2) Black oystercatcher breeding was disrupted and hatching success reduced. Chicks raised on oiled beaches grew more slowly than chicks raised on unoiled beaches, perhaps due to ingestion of contaminated food.	Related to R17, R103 and 93035.

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CH1A	Coastal Habitat Damage Assessment	USFS	Final report accepted by OSPIC; copies currently being made.	Highsmith, R.C., et al. Comprehensive assessment of coastal habitat. School of Fisheries and Ocean Sciences, UAF. Serious and long-term lasting effects on intertidal algae. Recovery occurring but slow to none in upper intertidal habitat. Full recovery expected. Intertidal invertebrates indicate negative effects from spill. Intertidal fish findings were inconclusive.	Continued as R102, 93039 and 94086.
CH1B	Hydrocarbons in Mussels	NOAA	REPORT OVERDUE. Draft report peer reviewed; returned to PI for revision May 8, 1995. Now expect to submit redraft by March 1, 1996.	<i>Exxon Valdez</i> oil is located in several sites. Reductions in hydrocarbons are seen at several sites in PWS over 1989.	R103
FS01	Spawning Area Injury	ADFG	REPORT OVERDUE. Was to be submitted to Chief Scientist by August 15, 1995. [Note: Report will present findings from both FS01 and R60B.]	Documented oil contamination of Prince William Sound pink salmon spawning area. Improved current and historic pink salmon escapement estimates which are necessary for accurate estimates of total wild returns. For preliminary results, see 1989, 1990 and 1991 NRDA Draft Status Reports.	Project conducted in conjunction with R60B.

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FS02	Pre-emergent Fry	ADFG	Final report accepted by OSPIC; copies currently being made.	Sharr, S, B. Bue, et al. Injury to salmon eggs and pre-emergent fry in PWS. ADF&G. Measured higher embryo mortalities in oil-contaminated streams than in unoiled streams.	Project conducted in conjunction with R60C; continued as 93002 and 94191.
FS03	Coded-Wire Tags Damage Assessment	ADFG	Redraft of final report submitted to Chief Scientist November 30, 1995. [NOTE: Report accepted by Chief Scientist February 9, 1996.]	Sharr, S., et al. Coded wire tag studies on PWS salmon, 1989-91. Unable to detect significant differences in survival to adults from fry emerging from oiled and control streams. Also unable to detect significant difference in survival of hatchery fish reared in oiled versus unoiled areas of Prince William Sound.	Project conducted in conjunction with R60A; continued as 93067, 93068, 94185, and 94320B.
FS04A	Early Marine Salmon Damage Assessment	ADFG	Final report accepted by OSPIC; available to public.	Willette, M., et al. Early marine salmon injury assessment in PWS. ADF&G Detected reduced growth and survival of fry-rearing in oiled areas in 1989. No significant differences in growth and survival between oiled and nonoiled areas in subsequent years. Rate of adult returns to unoiled hatcheries twice that of oiled hatcheries in 1990.	Related to most projects in 94320 (PWS System Investigation). FS1, FS2, FS3, FS4A, and FS4B measured oil damages to specific life stages. FS28 incorporated their results into a model to estimate population level damages.

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FS04B	Juvenile Pinks	NOAA	Final report accepted by OSPIC; available to public.	Wertheimer, A.C., A.G. Celewycz, M.G. Carls, and M.V. Sturdevant. 1994. Impact of the oil spill on juvenile pink and chum salmon and their prey in critical nearshore habitats. NOAA, NMFS, Auke Bay Lab, Juneau, AK. Documented exposure and contamination of juvenile salmon in Prince William Sound. Contamination was associated with reduced growth. Ingestion of oil or oiled prey was route of contamination.	FS4A, AW3, and ST3A.
FS05	Dolly Varden Damage Assessment	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC. Report includes data from R090.	Two populations of Dolly Varden and cutthroat trout emigrated from lakes into the wake of the spill. Growth from 1989-1990 was 24% and 22% slower for recaptured subadult and adult Dolly Varden and 36% to 43% slower for subadult and adult populations of cutthroat trout in populations associated with the oil. This difference persisted through 1991 for cutthroat trout but not for Dolly Varden. Chronic starvation and direct exposure to petrogenic hydrocarbons were hypothesized as effects leading to reduced growth and accelerated mortality of both Dolly Varden and cutthroat trout.	Combined with R90.

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FS11	Herring Injury	ADFG	Redraft of report submitted to Chief Scientist March 14, 1995. [NOTE: Report will include nine articles prepared for the Canadian Journal of Fisheries and Aquatic Science and will be included in the proceedings of the EVOS symposium.]	Brown, E. D., et al. Injury to Prince William Sound Following the <i>Exxon Valdez</i> Oil Spill. Adult herring migrating to the spawning grounds in 1989 were exposed to oil. Exposure to oil continued throughout 1989 and into 1990. Internal tissues were damaged but the short- and long-term effects are speculative. There may have been a short-term effect which inhibited egg deposition and a long-term reproductive impairment (reduced survival of offspring). Eggs were deposited in oiled areas in 1989. Larvae hatched from exposed embryos suffered reduced survival.	Similar to 94166 (Herring Spawn Deposition). Also related to 94165 and 94320.
FS13	Effects of Hydrocarbons on Bivalves	ADFG	REPORT OVERDUE. Draft report peer reviewed; returned to PI for revision April 26, 1993. [NOTE: Redraft of report submitted to Chief Scientist February 14, 1996.]		Clams are important prey for ducks, sea otters, river otters, and bears. This study is related to studies of these species and to 93017.

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FS27	Sockeye Salmon Overescapement	ADFG	Final report accepted by OSPIC; available to public.	Schmidt, D.C., T.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. King, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, <i>Exxon Valdez</i> Oil Spill State/Federal Natural Resource Damage Assessment Final Report, ADFG, Commercial Fisheries Management and Development Division, Soldotna, AK.	Continued as 93002 and 94258. R53 acquired new information to facilitate management of anticipated reduced future runs. R113 examined potential for hatchery-reared fry in Red Lake, but forecasted returns make the project unfeasible.
				Approximately ten to fifteenfold reduction in Kenai River smolt when compared to brood year 1987. Reduced smolt production from Akalura and Red Lakes, Kodiak Island. Reduced harvests for the Kenai are forecast for 1994 with returns below escapement levels possible for 1995 and 1996. Minimal harvests of Kenai River sockeye salmon are likely. Reduced harvests are forecast for Red and Akalura Lakes for 1994 through 1996.	
FS28	Run Reconstruction	ADFG	Redraft of report submitted to Chief Scientist August 8, 1995. (NOTE: Final report accepted by Chief Scientist January 26, 1996. Not yet at OSPIC.)	Geiger, H., et al. Run reconstruction and life-history model. Estimated losses to adult populations from oil damages to early life stages at 2 to 3 million in 1990, and 40 to 70 thousand in 1991. Projected losses of 100 to 200 thousand adults in 1993 and 1994.	Through this project, results from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage.

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FS30	Database Management	ADFG	Final report accepted by OSPIC; available to public.	DiCostanzo, C. and B.P. Simonson. 1993. Database management, <i>Exxon Valdez</i> Oil Spill Final Report, ADF&G, Division of Commercial Fisheries, Juneau, AK. Software was written to provide access to fish harvest database using the ADFG commercial fisheries Wide-Area Network (WAN). Procedures were implemented to provide reports in numerous database, spreadsheet, and statistical formats. Documentation and guidelines for using the harvest database were completed. WAN capability is now available between Juneau, Cordova, Anchorage, Kodiak, Soldotna, and Homer.	This database provides a repository for all NRDA and restoration projects information.
MM1	Humpback Whales Damage Assessment	NOAA	Final report submitted to OSPIC; undergoing formatting review. [NOTE: Final report accepted by OSPIC; available to public February 1996.]	Dalheim, M. and O. von Ziegesar. 1993. Effects of the <i>Exxon Valdez</i> oil spill on the abundance and distribution of humpback whales (<i>megaptera novaeangliae</i>) in Prince William Sound. NMFS, Seattle, WA and North Gulf Oceanic Society, Homer, AK. In 1989, photographic analysis of PWS humpbacks revealed 59 whales identified in 119 encounters. In 1990, 66 whales were identified in 201 encounters. The number of humpbacks encountered per day was less in 1989 and 1990 than in 1988. Because of the difference in survey effort before and after the spill, it is difficult to determine whether there was a difference in the number of humpbacks using PWS. Regarding distribution of whales in PWS: In 1988 and 1990, more whales used the Lower Knight Island Passage than in 1989. Increased vessel and aircraft traffic and distribution of prey may have been contributing factors for the temporary redistribution of whales during 1989. Despite considerable research effort, only one PWS humpback was documented to move from PWS to southeastern Alaska during 1989.	

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MM2	Killer Whales Damage Assessment	NOAA	Final report submitted to OSPIC; undergoing formatting review. [NOTE: Final report accepted by OSPIC; available to public February 1996.]	Dalheim, M. and C. Matkin. 1993. Assessment of injuries to killer whales in Prince William Sound, Kodiak Archipelago, and Southeast Alaska. National Marine Mammal Laboratory, Seattle, WA and North Gulf Oceanic Society, Homer, AK. In 1989, 8 resident (143 killer whales) and 4 transient pods (34 whales) were documented in 89 encounters. In 1990, 9 resident pods (148 whales) and 4 transient pods (30 whales) were identified in 80 encounters. During 1991, 7 resident pods (105 whales) and 2 transient pods (14 whales) were identified in 54 encounters. Despite increased effort over these 3 years, the number of encounters appears to be decreasing. The missing animals were not seen near Kodiak Island or southeast Alaska. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the 1989-1991 period. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, 4.3% in 1991, and zero in 1992. Killer whale annual mortality rates are usually less than 2%.	

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MM6 (1 of 3)	Sea Otter Damage Assessment	DOI	The results of this project will be presented in 19 reports -- 15 reports have been accepted by the Chief Scientist (10 are available to the public at OSPIC); 4 reports have been redrafted and submitted to the Chief Scientist for further peer review.	(1) Ballachey, B.E. Biomarkers of damage to sea otters in PWS following potential exposure to oil spilled from the T/V <i>Exxon Valdez</i> . [Final report accepted by OPSIC; available to public] (2) Ballachey, B.E. and D.M. Mulcahy. Hydrocarbon residues in tissues of sea otters (<i>Enhydra lutris</i>) collected from southeast Alaska. [Redraft of report submitted to Chief Scientist June 30, 1995; under peer review.] (3) Ballachey, B.E. and D. M. Mulcahy. Hydrocarbons in hair, livers and intestines of sea otters (<i>Enhydra lutris</i>) found dead along the path of the <i>Exxon Valdez</i> oil spill [Redraft of report submitted to Chief Scientist June 30, 1995; under peer review.] (4) Bodkin, J.L., D.M. Mulcahy and C. Lensink. Age-specific reproduction in female sea otters (<i>Enhydra lutris</i>) from southcentral Alaska: analysis of reproductive tracts. [Report accepted by Chief Scientist, not yet at OSPIC] (5) Bodkin, J.L. and M.S. Udevitz. An intersection model for estimating sea otter mortality from the <i>Exxon Valdez</i> oil spill along the Kenai Peninsula. [Final report accepted by OSPIC; available to public]	Continued as 93043.

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MM6(2of3)	Sea Otter Damage Assessment	DOI	See MM6(1of3).	(6) Burn, D.M. Boat-based population surveys of sea otters (<i>Enhydra lutris</i>) in PWS in response to the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist; not yet at OSPIC.] (7) DeGange, A.R., D.C. Douglas, D.H. Monson and C. Robbins. Surveys of sea otters in the Gulf of Alaska in response to the <i>Exxon Valdez</i> oil spill. [Final report accepted by OSPIC; available to public.] (8) Doroff, A.M. and J.L. Bodkin. Sea otter foraging behavior and hydrocarbon levels in prey following the <i>Exxon Valdez</i> oil spill in PWS, Alaska [Redraft of report submitted to Chief Scientist June 30, 1995; under peer review.] (9) Doroff, A.M. and A.R. DeGange. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the <i>Exxon Valdez</i> oil spill. [Final report accepted by OSPIC; available to public.] (10) Lipscomb, T.P., R.K. Harris, R.B. Moeller, J.M. Fletcher, R.J. Haebler and B.E. Ballachey. Histopathologic lesions associated with crude oil exposure in sea otters. [Report accepted by Chief Scientist. Not yet at OSPIC.] (11) Lipscomb, T. P., R.K. Harris, A.H. Rebar, B.E. Ballachey and R.J. Haebler. Pathological studies of sea otters. [Report accepted by Chief Scientist. Not yet at OSPIC.] (12) Monnett, C. and L.M. Rotterman. Movements of weanling and adult female sea otters in PWS after the <i>Exxon Valdez</i> oil spill. [Final report accepted by OSPIC; available to public.]	

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MM6(3of3)	Sea Otter Damage Assessment	DOI	See MM6(1of3).	(13) Monnett, C. and L.M. Rotterman. Mortality and reproduction of female sea otters in PWS. [Final report accepted by OSPIC; available to public.] (14) Monnett, C. and L.M. Rotterman. Mortality and reproduction of sea otters oiled and treated as a result of EVOS. [Final report accepted by OSPIC; available to public.] (15) Monson, D.H. and B.E. Ballachey. Age distributions and sex ratios of sea otters found dead in PWS following the <i>Exxon Valdez</i> oil spill. [Report accepted by OSPIC; available to public.] (16) Mulcahy, D.M. and B.E. Ballachey. Hydrocarbon residues in tissues of sea otters (<i>Enhydra lutris</i>) collected following the <i>Exxon Valdez</i> oil spill. [Redraft of report submitted to Chief Scientist June 30, 1995; under peer review.] (17) Rebar, A.H., B.E. Ballachey, D.L. Bruden and K.A. Kloecker. Hematology and clinical chemistry of sea otters captured in PWS following the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist. Not yet at OSPIC.] (18) Rotterman, L.M. and C. Monnett. Mortality of sea otter weanlings in eastern and western PWS during the winter of 1990-91. [Final report accepted by OSPIC; available to public.] (19) Udevitz, M.S., J.L. Bodkin and D.P. Costa. Detection of sea otters in boat based surveys in PWS. [Final report accepted by OSPIC; available to public.]	

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R011	Murre Recovery Monitoring	DOI	Final report accepted by OSPIC; copies currently being made.	Dragoo, D.E., G.V. Byrd, D.G. Roseneau, D.A. Dewhurst, J.A. Cooper, and J.H. McCarthy. 1994. Population levels and reproductive performance of murre based on observations at breeding colonies four years after the T/V <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Homer Numbers of murre breeding at major colonies within the trajectory remained lower in 1992. Breeding chronology was delayed. Productivity at the Barren Islands was higher than in other postspill years, but still lower than normal. Productivity at Puale Bay was normal.	Continued as 93022 and 94039. Also related to B3.
R015	Marbled Murrelet Restoration Study	DOI	The results of this project will be presented in two reports: (1) Report accepted by Chief Scientist. Not yet at OSPIC. (2) Report accepted by Chief Scientist. Not yet at OSPIC.	(1) Kuletz, K.J., D.K. Marks, and N.L. Naslund. 1994. At-sea abundance and distribution of marbled murrelets in the Naked Island area, Prince William Sound, Alaska, in Summer, 1991 and 1992. U.S. Fish and Wildlife Service, Anchorage (2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the <i>Exxon Valdez</i> oil spill zone. U.S. Fish and Wildlife Service, Anchorage. Using ground search techniques, 10 tree nests were found on Naked Island in 1991 and 1992. Nest trees were in stands of high volume and size class trees, and upland activity of murrelets throughout Prince William Sound was highest in such stands.	Continued as part of 93051 and 94505 (closeout).

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R047	Stream Habitat Assessment	ADFG	Report accepted by OSPIC; available to public.	Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. ADF&G. About 250 km of shoreline and 260 km² of uplands were surveyed for anadromous fish streams on private lands on Afognak Island, resulting in discovery of 167 anadromous streams totaling about 56 km. Stream habitat parameters and upper extents of anadromous distribution were documented, and streams were mapped by GPS.	Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection.
R053	Kenai River Sockeye Salmon Restoration	ADFG	Final report accepted by OSPIC; available to public.	Tarbox, K., et al. Kenai River sockeye salmon restoration. Successful collection of baseline and fishery samples for genetic stock identification. Unsuccessful in choosing new adult in-river hydroacoustic equipment. Successful hydroacoustic enumeration of returning adult salmon in Upper Cook Inlet.	R59 analyzed genetic samples collected by this project.
R059	Genetic Stock Identification	ADFG	Annual report accepted by OSPIC; copies currently being made.	Seeb, J. and L. Seeb. Assessment of genetic stock structure of salmonids. ADF&G. June 1993. Genetic data were collected during 1992 from spawning populations contributing to mixed-stock harvests of sockeye salmon in Cook Inlet. These data can be used to estimate the presence of Kenai River stocks in mixed-stock areas of Upper Cook Inlet.	R53 collected spawning samples.

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R060A/B	Prince William Sound Pink Salmon	ADFG	R060A: Redraft of report submitted to Chief Scientist November 30, 1995. [NOTE: Final report accepted by Chief Scientist February 9, 1996.] R060B: Findings will be presented in report being prepared under Project FS01.	R060A: Sharr, S. et al. Coded wire tag studies on PWS salmon, 1992. R060B: See FS01. R060A: The CWT program helped reduce the commercial harvest on damaged pink salmon populations by providing fishery managers with timely inseason fishery stock composition estimates. R060B: The escapement project provided improved pink salmon escapement information which was essential for the precise fisheries management required to protect damaged wild stocks.	Continued as 93067, 94184 (report preparation) and 94320B. Also related to R60C, which monitors and investigates mechanisms for oil damage to early life stages of pink salmon populations.
R060C	Pink Salmon Egg/Fry	ADFG, NOAA	The results of this project will be presented in two reports: (1) ADFG report accepted by OSPIC; available to public. (2) NOAA findings included in annual report prepared under 94191. See 94191 for status.	(1) Sharr, Samuel and C. Peckham. 1994. Coded wire tag studies on Prince William Sound salmon, 1992. ADFG (2) See 94191. (1) Persistence of elevated mortalities among embryos in oiled streams versus those in unoiled streams suggests genetic damage. (2) Oil exposures completed for 1992 and 1993 brood years. All 1992 brood pinks died from bacterial kidney disease by June 1994. Spawning of 1993 brood expected in September 1995, with survival of progeny to be determined in early 1996.	Continued as 93003 and 94191. Other related projects include B11, CH1B, R60AB, R103, and 93036.

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R071	Harlequin Duck Restoration and Monitoring	ADFG	REPORT OVERDUE. Draft report peer reviewed; returned to PI for revision May 22, 1995.	Rothe, T. Breeding ecology of harlequin ducks in PWS, Alaska. ADF&G. Crowley, D.W. 1993. Breeding habitat of harlequin ducks in PWS, AK. MS Thesis. Oregon State University, Corvallis, OR. Comparative harlequin data in eastern Prince William Sound for B11. 1991-1992 harlequin production in eastern Prince William Sound similar to prespill. Techniques devised to capture and track harlequins. Breeding stream parameters and nest sites described. Additional oiled mussel beds identified. Description and analysis of harlequin breeding stream habitat in eastern PWS produced in an M.S. thesis, Oregon State University (Crowley 1994).	B11 corroborated harlequin status in Prince William Sound. R103 documented continued oiled prey. B2 corroborates harlequin status in PWS.
R073	Harbor Seals	ADFG	Final report accepted by OSPIC; available to public.	Frost, K.J. and L.F. Lowry. 1994. Assessment of injury to harbor seals in PWS and adjacent areas following EVOS. ADF&G, Wildlife Conservation Division, Fairbanks, AK. Harbor seals continued to use heavily oiled haulouts even when unoiled sites were available nearby. They were observed to give birth and care for their pups on these sites. The pelage of both pups and adults became oiled when they used these sites or contacted oil in the water. However, the pelage became cleaner with time if they did not continue to use oiled sites. Many carcasses recovered were either stillborn or died shortly after birth. Observations suggest that stress and/or toxic effects of oil resulted in abortions, premature births, and increased mortalities in heavily oiled areas. Four book chapters prepared and in press detailing results of MM5 study.	Started in 1989 as MM5. Continued as 93046 and 94064.

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R090	Dolly Varden Char Monitoring	ADFG	Report being prepared under Project FS05.	See FS05. Two populations of Dolly Varden and cutthroat trout emigrated from lakes into the wake of the spill. Growth from 1989-1990 was 24% and 22% slower for recaptured subadult and adult Dolly Varden and 36% to 43% slower for subadult and adult populations of cutthroat trout in populations associated with the oil. This difference persisted through 1991 for cutthroat trout but not for Dolly Varden. Chronic starvation and direct exposure to petrogenic hydrocarbons were hypothesized as effects leading to reduced growth and accelerated mortality of both Dolly Varden and cutthroat trout.	Project combined with FS05. R90 and R106 provide information on populations of Dolly Varden and cutthroat trout for 94320 (Ecosystem Study Plan).
R092	GIS Mapping and Analysis: Restoration	ADNR	No report required.	Provided mapping and database support for restoration projects. Developed timber harvest database and land status and parcel maps for imminent threat parcels. Contributed to a 3-volume data dictionary produced for the Trustee Council by the Nature Conservancy.	Supported numerous restoration projects.

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R102	Herring Bay Experimental and Monitoring Study	ADFG	Final report accepted by OSPIC; available to public.	Highsmith, R.C., M.S/ Stekoll, A.J.Hooten, P. van Tamelen, L. Deysher, L. McDonald, D. Strickland and W.P. Erickson. 1993. Herring Bay experimental and monitoring studies. School of Fisheries and Ocean Sciences, UAF. Cover of the dominant intertidal alga, <i>Fucus gardneri</i> , was reduced at oiled/cleaned sites. <i>Fucus</i> recruitment was poor in the mid- to upper intertidal, probably due to lack of shelter from desiccation and heating by adult plants. Limpet densities continued to be lower in the upper intertidal. Recovery appeared to be occurring in the lower intertidal zone in 1990-1991 and in the upper intertidal in 1993. Results have been incorporated into an interaction web to elucidate potential oil spill effects on community dynamics.	Continued as 93039 and 94086.

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R103	Oiled Mussels	ADFG, NOAA, DOI	The results of this project will be presented in four reports: (1) NOAA report accepted by Chief Scientist. Not yet at OSPIC. (2) DOI/FWS findings being incorporated into report on 93035. (3) ADFG report accepted by Chief Scientist. Not yet at OSPIC. (4) DOI/NPS report accepted by Chief Scientist. Not yet at OSPIC.	(1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the <i>Exxon Valdez</i> oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska. (2) See 93035. (3) Faro and Bowyer. River otter component. (4) Irvine, G. 1993 Geographic extent and recovery monitoring of intertidal oil in mussel beds in Gulf of Alaska effected by the <i>Exxon Valdez</i> oil spill.	Continued as 93036, 94090, and 95090.
				(1) Identified 27 mussel beds within PWS with total petroleum hydrocarbons greater than 10,000 mg/g wet weight. Site manipulation was conducted at three heavily oiled mussel beds. (2) Black oystercatcher chicks raised on oiled sites grew more slowly than chicks raised on unoiled sites. (3) Differences in levels of blood haptoglobin and Interleukin-6 in, previously found to be elevated in river otters inhabiting oiled compared to nonoiled areas in PWS, were not observed in summer 1992. River otters from oiled areas continued to regain body size from levels noted in 1990. Suggests that river otters may be recovering from chronic effects that were observed in 1990 and 1991.	

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R104A	Site Stewardship	DOI	Final report accepted by OSPIC; copies currently being made.	Corbett, D.G. 1994. Development of the Alaska Heritage Stewardship Program for protection of cultural resources at increased risk due to the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage, AK. Increased public knowledge of archaeological sites following the spill led to increased vandalism. A stewardship program to train local residents to protect cultural resources was developed.	93006, 94007
R105	Instream Survey Restoration Implementation Planning	ADFG, USFS	The results of this project will be presented in two reports (report writing funded under 93063): (1) ADFG redraft of report submitted to Chief Scientist August 25, 1995. [NOTE: Final report accepted by Chief Scientist February 2, 1996. Not yet at OSPIC.] (2) USFS report accepted by Chief Scientist. Not yet at OSPIC.	(1) Willette, M. Survey and evaluation of instream habitat and stock restoration techniques for wild pink and chum salmon. (2) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. A number of sites were reviewed, evaluated, and ranked for possible instream restoration efforts. A number of efforts have subsequently been implemented.	Continued as 93063.

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R106	Dolly Varden Restoration	ADFG	Final report accepted by OSPIC; available to public.	McCarron, S. and A.G. Hoffman, 1993. Technical support study for the restoration of Dolly Varden and cutthroat trout populations in PWS. ADF&G, Division of Sport Fish, Anchorage, AK. The nature and extent of injury to Dolly Varden and cutthroat trout was documented in FS5. The goal of R106 was to provide information for developing a management plan to protect impacted stocks, while allowing for continued recreational fishing for sport anglers where stocks could support fisheries. Sixty-one streams were surveyed to provide this information.	FS5 and 94139.
R113	Red Lake Sockeye Salmon Restoration	ADFG	Project canceled based on findings of FS27.	Red Lake does not need restoration effort. This project was funded in anticipation of poorer returns of sockeye salmon to Red Lake than actually occurred.	Related to FS27. NEPA compliance for Red Lake restoration project was funded through 93030, which was canceled when the project was dropped.
RT	Restoration Team	ALL	No report required.		

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ST1A	Subtidal Sediments	NOAA	REPORT OVERDUE. [NOTE: Redraft of final report submitted to Chief Scientist February 9, 1996; accepted by Chief Scientist February 20, 1996.]	Petroleum hydrocarbon induced injury to subtidal sediment resources. Subtidal sediments have been found to be contaminated at no fewer than 15 sites within Prince William Sound by June 1990. Contamination had reached at least 20 meters at some sites. Evidence of hydrocarbon movement downslope into subtidal sediments was detected by 1991.	Continued as 93047 and 94285. Other related projects include ST1B.
ST1B	Subtidal Microbial	ADEC	Final report accepted by OSPIC; available to public.	Braddock, Joan F., B. Rasley, T. Yeager, J. Lindstrom, D. Brown. Hydrocarbon mineralization potentials and microbial populations in marine sediments following the <i>Exxon Valdez</i> oil spill. DEC The numbers and activity of oil-degrading microorganisms were measured in sediments periodically for two years after the oil spill. Populations of oil-degrading microorganisms were significantly higher in sediments collected at oiled sites relative to reference sites. This information is useful in establishing the extent of contamination of the oil with time and also provides evidence that biodegradation is occurring naturally in Prince William Sound.	93047
ST2A	Shallow Benthic	ADFG	No report required. (Data/findings incorporated into report on 93047.)	See 93047. At oiled sites there was a decrease in some subtidal organisms relative to unoiled sites. Partial recovery observed in 1991.	Continued as 93047 and 94285. Other related projects include B11, CH1A, R103, and TM3.

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ST2B	Deep Water Benthic	ADFG	Final report accepted by OSPIC; available to public.	Feder, H. 1995. Injury to deep benthos. ADFG No indication of oil-related damage to deep benthic environment. No oil fractions appear related to unusual benthic faunal composition. Differences between stations within and outside of oil trajectory were mainly related to sediment differences. No oil effects demonstrated.	CH1A, ST1B, ST2A, ST4, ST5, ST6, ST7, ST8, and TS1.
ST3A	Caged Mussels Damage Assessment	NOAA	The results of this project will be presented in two reports: (1) Redraft of report submitted to Chief Scientist July 18, 1995. (2) Report submitted to OSPIC; undergoing formatting review.	(1) Petroleum hydrocarbons in near surface seawater of PWS: chemical sampling and analysis. (2) Petroleum hydrocarbons in near surface seawater of PWS: analysis of caged mussels. Mussels transplanted along spill trajectory accumulated particulated oil at concentrations that decreased with depth, elapsed time, and distance from heavily oiled beaches. In 1990 and 1991, low concentrations of polynuclear aromatic hydrocarbons were sporadically detected at locations adjacent to heavily oiled beaches. Petroleum hydrocarbons were detected only sporadically in mussels deployed in locations outside Prince William Sound in 1989.	ST3B

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ST3B	Sediment Traps Damage Assessment	ADEC	Final report accepted by OSPIC; available to public.	Sale, David M., J. Gibeau, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the <i>Exxon Valdez</i> oil spill. ADEC The subtidal sediment trap study demonstrated that oiled particulate matter derived from oil-impacted beaches in Prince William Sound contaminated adjacent subtidal sediments. The study further showed that the transfer rate of oil from beach to subtidal sediment was highest the year following the spill, and declined steadily thereafter.	ST3A and ST4
ST4	Fate and Toxicity Damage Assessment	NOAA	Report submitted to OSPIC; undergoing final formatting review.	Fate and toxicity of spilled oil from the <i>Exxon Valdez</i>. 1994. Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of <i>Exxon Valdez</i> oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely.	AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies.
ST5	Shrimp	ADFG	Final report accepted by OSPIC; available to public.	Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp. ADF&G, Commercial Fisheries Management and Development Division, Anchorage, AK. Hydrocarbon analyses did not detect oil contamination with sampled spot shrimp. Shrimp collected in unoiled areas had more inflammatory gill lesions than did shrimp from the oiled area. These results indicate that oil contamination had little or no effect on spot shrimp.	

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ST6	Rockfish Damage Assessment	ADFG	Final report accepted by OSPIC; available to public.	Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91. Oil was determined to be the cause of death for a small number of demersal rockfish in Prince William Sound. Dead and dying rockfish were reported from the spill area. Of the five fish that were fresh enough to be necropsied, exposure to crude oil was found to be the cause of death. These results prompted additional testing for hydrocarbons in live fish. These tests showed at least 11 of 36 rockfish tested from oiled sites had been exposed to oil within 2 weeks prior to testing. None of the 13 fish from unoiled sites were exposed to oil. Subsequent studies showed some indications of sublethal injuries to rockfish from exposure to oil.	ST2A and ST2B
ST7	Demersal Fishes Damage Assessment	NOAA	Final report accepted by OSPIC; copies currently being made. [NOTE: Final report available to public January 31, 1996.]	Collier, T. Assessment of oil spill impacts on fishery resources: measurement of hydrocarbons and their metabolites, and their effects, in important species. NOAA Results show continuing exposure of several benthic fish species and pollock, suggesting continuing petroleum contamination of subtidal sediments, water and food in 1990 and 1991 at sites up to 400 miles from the spill origin.	ST1A

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ST8	Sediment Data Synthesis	NOAA	REPORT OVERDUE. [NOTE: Per Bruce Wright 2/14/96, Jeff Short preparing letter to Executive Director requesting extension so data from Ron Heinz's project can be included in report; Bruce says the Chief Scientist supports the extension.]	Report will include electronic database. Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.	TS1, TS3, and 93053.
TM3	River Otter and Mink Damage Assessment in Prince William Sound	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	The results indicate that differences in home range, habitat selection, and latrine site abandonment, as well as changes in food habits, occurred in river otters.	CH1B and R103
TS1	Hydrocarbon Analysis	NOAA	Report being prepared under ST8.	See ST8. Coordinated the chemical analysis of all samples collected by damage assessment studies to develop a single set of analytical data comparable across projects.	ST8, TS3, and B08.
TS3	GIS Mapping and Analysis: Damage Assessment	ADNR	No report required.	Provided mapping and database support for damage assessment projects.	Supported numerous damage assessment projects, including FS 4, FS13, CH1A and R47.

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93002	Sockeye Salmon Overescapement	ADFG	Annual report (funded under 94258) accepted by Chief Scientist February 22, 1995. Not yet at OSPIC.	Schmidt, D., et al. Sockeye salmon overescapement. Red Lake 1994 plankton indicate downward trend associated with increased sockeye salmon fry recruitment. May suggest increased smolt production in 1995 likely. Akalura Lake failed to meet escapement goals. Adult return to Red Lake accurately forecasted by smolt program. Kenai River adult return forecast with large bounds because of uncertainty of smolt production in 1990.	Project is continuation of FS27, 93002. Continued as 94258.
93003	Salmon Egg to Pre-emergent Fry Survival	ADFG NOAA	The results of this project will be presented in two reports (funded under 94191): (1) ADFG report accepted by OSPIC; available to public. (2) NOAA results included in report prepared under 94191. See 94191 for status.	(1) Sharr, S. and J.E. Seeb. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound. (2) See 94191. Oil exposures completed for 1992 and 1993 brood years. 1992 brood pink salmon died from bacterial kidney disease; spawning not possible. Precautions to ensure survival of 1993 brood have been taken. Persistence of elevated embryo mortalities in oiled streams in 1992 indicate possible genetic damage to wild pink salmon populations from the <i>Exxon Valdez</i> oil spill. Preliminary laboratory studies support the genetic hypothesis. Additional laboratory studies demonstrate dose response of pink salmon embryos when incubated in gravel exposed to crude oil from the <i>Exxon Valdez</i> .	Started in 1989 as FS2 and continued as R60C and 94191.

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93006	Site Specific Archaeological Restoration	DOI/ NPS	REPORT (funded under 94007) OVERDUE.	Birkedahl, T., et al. 1993. Archaeological site monitoring and restoration.	Continued as 94007.

Archaeological restoration assessments conducted at 14 sites in 1993 suggest that a majority of the archaeological vandalism that can either be directly or indirectly linked to the *Exxon Valdez* oil spill event occurred in 1989 before adequate constraints were put into place over the activities of oil spill clean-up personnel. Most vandalism took the form of "prospecting" for high yield sites. In 1993, only two of the 14 sites visited showed signs of continued vandalism and the link between this recent vandalism and the *Exxon Valdez* oil spill event remains highly problematical. Oil monitoring samples from the archaeological sites have not been processed as of this date, but oil was still visible to the naked eye in the intertidal zones of two of the 14 sites visited.

93012	Genetic Stock Identification of Kenai River Sockeye Salmon	ADFG	Draft report (funded under 94504) submitted to Chief Scientist November 6, 1995; under peer review.	Genetic data were collected during 1992 and 1993 from spawning populations contributing to mixed-stock harvest of sockeye salmon in Cook Inlet. These data were used in a pilot study to estimate the component of Kenai River stocks harvested in mixed-stock areas of Upper Cook Inlet.	Began as R52. Continued as 94504. Spawning samples collected under 93015.
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93015	Kenai River Sockeye Salmon Restoration	ADFG	Annual report accepted by OSPIC; available to public.	Tarbox, K., et al. Kenai River sockeye salmon restoration. Successful collection of baseline and fishery genetic samples. Successful in-season hydroacoustic survey of Upper Cook Inlet by subcontractor.	Began as R52 and continued as 94255. Genetic samples analyzed under 93012.
93016	Chenega Bay Chinook and Silver Salmon (NEPA Compliance)	ADFG	No report required (NEPA compliance only).		Continued as 94272. Also related to 93017.
93017	Subsistence Food Safety Survey and Testing	ADFG	Final report accepted by OSPIC; available to public.	Miraglia, R.A. 1995. Subsistence restoration project. ADF&G, Division of Subsistence, Anchorage, AK. First round of tests for hydrocarbon contamination of subsistence resources showed little or no contamination. Results of second round of testing are pending. The observations of abnormalities in the tested resources caused a shift in concerns of subsistence users from oil contamination to what effects these abnormalities have on these resources. A series of public meetings were held in communities to locate sites and species of concern.	Continued as 94279.
93024	Restoration of Coghill Lake Sockeye Salmon Stock	ADFG, USFS	Draft report peer reviewed; returned to PI for revision September 15, 1995.	Monitoring showed the need for modifying both the type and concentrations of fertilizer.	Continued as 94259 and 95259.
93032	Cold Creek Pink Salmon Restoration (NEPA Compliance)	ADFG	Project canceled.		R105

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
93033	Harlequin Duck Restoration	ADFG	The results of this project will be presented in two reports (funded under 94066): (1) Report on Afognak habitat assessment and PWS production survey submitted to Chief Scientist August 9, 1995. (2) REPORT OVERDUE. Analyses of blood and physiological samples (being performed by UC-Davis) not received. Contract compliance is now two years delinquent.	(1) Restoration monitoring of harlequin ducks in PWS and Afognak Island. Only 3 harlequin broods observed in western Prince William Sound; 14 in eastern Prince William Sound. Decreased numbers of harlequins molting in western Prince William Sound in July. Suspect incomplete gonadal development in pre-nesting western Prince William Sound harlequins. Blood/physiological analysis and hydrocarbon analyses in process. Harlequin breeding stream/nest site model in preparation. Harlequin breeding assessment completed on North Afognak Island.	Started in 1989 as B11 and continued as R71. 94427 and 96427 continue harlequin brood surveys.
93034	Pigeon Guillemot Recovery	DOI	Report (funded under 94506) accepted by OSPIC; available to public.	Sanger, G.A. and M.B. Cody. 1994. Survey of pigeon guillemot colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service, Anchorage. One hundred eighty-four colonies, concentrated in southwest Prince William Sound and at Naked Island, were identified. This colony survey confirmed that the present population of pigeon guillemots in Prince William Sound is 3,000 - 4,900.	Continued as 94173.

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93035	Black Oystercatchers / Oiled Mussel Beds	DOI	Draft report (funded under 94020) submitted to Chief Scientist for peer review October 23, 1995. [NOTE: Draft report peer reviewed; returned to PI for revision January 3, 1996.] Report also includes findings from R103.	Andres, B. 1993. Potential impacts of oiled mussel beds on higher organisms: black oystercatchers. US Fish and Wildlife Service, Anchorage, AK. Growth rates of oystercatcher chicks were lower on oiled than unoiled nest sites. Some aliphatic compounds were detected in 1992 fecal samples from oiled sites. Breeding pairs increased on oiled Green Island from 1992 to 1993 but decreased on Knight Island from 1991 to 1993.	Continued as 94020.

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93036	Oiled Mussel Beds	DOI, NOAA	The results of this project will be presented in two reports: (1) DOI draft annual report peer reviewed; returned to PI for revision July 21, 1995. (2) Annual report submitted to Chief Scientist October 6, 1995; undergoing peer review. Annual report accepted by OSPIC; available to public. [NOTE: Annual report peer reviewed January 10, 1996.]	(1) Cusick, J.A. and G.B. Irvine. 1995. Geographical extent and recovery monitoring of intertidal oiled mussel beds in the Gulf of Alaska affected by the <i>Exxon Valdez</i> oil spill. (2) Babcock, M. Recovery monitoring and restoration of oiled mussel beds in PWS, Alaska. In 1992 and 1993, mussels and sediments from 70 mussel beds in PWS were sampled. Sediments collected from 31 of the oiled beds had total petroleum hydrocarbon concentrations greater than 10,000 ng/g wet weight. The highest concentrations were in sediments collected from Foul Bay (62,258 +/- 1,272 ng/g total polynuclear hydrocarbons). Minimally intrusive site manipulation was conducted at three heavily oiled mussel beds. Preliminary evaluations indicate these methods were not effective in reducing petroleum hydrocarbons adjacent to manipulated areas. Along the Kenai and Alaska Peninsulas, 15 mussel beds were sampled--four of which were new sites--and four of these beds showed total petroleum hydrocarbons in excess of 5,000 ng/g wet weight.	Continued as 94090.
93038	Shoreline Assessment	ADEC	Redraft of report submitted to Chief Scientist October 2, 1995. [NOTE: Draft report peer reviewed; returned to PI for revision January 26, 1996.]	Piper, E., et al. 1993 shoreline assessment. Surface oil has become stable. Subsurface oil has decreased substantially since 1991. Oiling is discontinuous throughout the study site.	

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93039	Herring Bay Experimental and Monitoring	ADFG	Draft report peer reviewed; returned to PI for revision September 15, 1995.	Highsmith, R.C., M.S. Stekoll, P. van Tamelen, A.J. Hooten, S.M. Saupe, L. Deysher, and W.P. Erickson. 1995. Herring Bay monitoring and restoration studies. School of Fisheries and Ocean Sciences, UAF. Examination of dominant intertidal alga, <i>fucus gardneri</i>, has shown that larger plants were removed from intertidal in areas affected by spill/clean-up. Where <i>fucus</i> cover was reduced, abundance of ephemeral algae often increased. Populations of grazing invertebrates, e.g., limpets and periwinkles, showed reduced densities at oiled sites in upper intertidal. Initially, barnacle recruitment was lower in quadrats on tar-covered rocks than clean quadrats, but differences disappeared at most sites over time. <i>Fucus</i> germlings and filamentous algae continued to have lower densities and percent cover on oiled than non-oiled substrates. Recovery occurring in lower/middle intertidal zones and normal community interactions returning. Upper intertidal continues to exhibit damage; recovery may take additional 2-5 years.	Evolved from CH1A and R102 and continued as 94086.
93041	Comprehensive Monitoring	NOAA	Project discontinued.		

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93042	Killer Whale Recovery	NOAA	Final report (funded under 94092) submitted to OSPIC; undergoing formatting review. [NOTE: Final report accepted by OSPIC; available to public February 14, 1996.]	Dalheim, M.E. 1994. Assessment of injuries and recovery monitoring of Prince William Sound killer whales using photo-identification techniques. National Marine Mammal Laboratory, Seattle, WA. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the period 1989-1991. Despite considerable searching effort in PWS and Southeast Alaska, the missing whales have not been observed. Given the stability of resident pods, it is assumed the missing whales are dead. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, and 4.3% in 1991. Zero mortality occurred in 1992 and 1993. The adult annual mortality rate of killer whales is usually less than 2%. Annual pod mortality rates on the order of 20% are unprecedented for North Pacific killer whales.	Close-out/report writing funded under 94092.

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93043	Sea Otter Demographics and Habitat	DOI (NBS)	The results of this project will be presented in three reports (funded under 94246): (1) Data on recovery of sea otter carcasses being presented in MM6 (#15). (2) Final report accepted by Chief Scientist. Not yet at OSPIC. (3) Draft report on sea otter demographics peer reviewed; returned to PI for revision August 21, 1995.	(1) See MM6(#15). (2) Bodkin, J.L. and M.S. Udevitz. 1993 trial aerial survey of sea otters in PWS, Alaska. 1994. NBS, Anchorage, AK. (3) Udevitz, M.S., B.E. Ballachey, and D. L. Bruden. 1995. A population model for sea otters in western PWS. USNBS, Anchorage, AK. Aerial survey of sea otters in Prince William Sound completed summer 1993; estimated abundance is approximately 18,000. Age distribution of sea otter carcasses recovered in spring 1993 in western Prince William Sound is similar to prespill distribution. Age- and sex-specific survival rates generated from carcass data for sea otters in Prince William Sound.	Report writing funded under 94246.
93045	Marine Bird / Sea Otter Surveys	DOI	Final report accepted by OSPIC; available to public.	Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage. Overall marine bird population estimates in Prince William Sound have not changed significantly since 1989, but were 41% lower than 1972-1973 estimates. Rates of increase of goldeneyes and surfbird populations were higher in the unoiled zone of Prince William Sound than in the oiled zone, whereas oystercatchers increased more rapidly in the oiled zone.	Started as part of B2 and continued as 94159.

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93046	Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS	ADFG	Final report (funded under 94064) accepted by OSPIC; available to public.	Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG Counts of seals at 25 trend sites in Prince William Sound were similar during pupping and molting in 1992 and 1993. However, 1993 pupping counts were 23% lower than in 1989. Molting counts were similar to 1989 postspill counts, but 27% lower than 1988 counts. Sixteen seals satellite-tagged since 1992 indicate that seals in central Prince William Sound haul out and feed near the same sites with little movement to other areas. Feeding usually occurs in depths of 100-200 meters, with a maximum recorded dive depth of 404 meters.	Started in 1989 as MM5, which was closed out as R73. Continued as 94064.

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93047	Subtidal Monitoring	ADEC, ADFG, NOAA	The results of this project will be presented in three reports (funded under 94285): (1) NOAA sediments - Draft final report peer reviewed and returned to PI for revision October 20, 1995. (2) ADEC microbiology - Final report accepted by OSPIC; available to public. (3) ADFG eelgrass - Final report accepted by OSPIC; available to public.	(1) Recovery of sediments in the subtidal sediment environment. (2) Braddock, J. Microbiology of subtidal sediments: monitoring and microbial populations. (3) Jewett, S., et al. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in PWS 1989-93. As a follow-up to previous studies from 1989-1991, the numbers and activity of oil-degrading microorganisms were measured in sediments collected in 1993. Preliminary results suggest some contamination remains in subtidal sediments. However, generally very low numbers were found where visible oil was present (e.g., subsurface sediments, Northwest Bay). Analysis of 1993 eelgrass data complete. Several infaunal and epifaunal taxa more abundant in oiled bed sites than control sites. Amphipods less abundant in oiled sites. Sea urchins are more abundant. <i>Hemosiderosis</i> in fishes from oiled sites.	Started as ST1A and continued as 94285. Report writing under 94285.
93049	Monitor Murre Colony Recovery	DOI/ FWS	Final report accepted by OSPIC; copies currently being made.	Roseneau, D. 1995. Common murre Restoration monitoring in the Barren Islands, Alaska, 1993. U.S. Fish and Wildlife Service, AK Maritime NWR, Homer, AK. Murre productivity in the Barren Islands was 0.4 - 0.6 chicks per nest site in 1993, up from near zero in 1989. Population counts on plots were similar to or higher than in previous postspill years.	Started as R11 and continued as 94039. (Formerly in EVOS database as 93022.)

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93051	Habitat Information for Anadromous Streams and Marbled Murrelets	ADFG, DOI, USFS	The results of this project will be presented in 5 reports (funded under 94505): (1) ADFG Stream Habitat Assessment/PWS & Lower Kenai- Final report accepted by OSPIC; available to public. (2) USFS Habitat Protection Info. for Channel Type Classification Study- findings included in report prepared under 95505B. See 95505B for results. (3) DOI Pilot Study on Capture and Radio Tagging of Murrelets in PWS- Final report accepted by Chief Scientist; not yet at OSPIC. (4) DOI Information Needs for Habitat Protection: Marbled Murrelet Habitat Identification -Final report accepted by OSPIC; available to public. (5) USFS Upland Nesting Habitat of Marbled Murrelet - final report accepted by OSPIC; available to public.	(1) Sundet, K., et al. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula. ADFG (2) See 95505B. (3) Burns, R.A., et al. 1994. Pilot study on the capture and radio tagging of murrelets in PWS, AK, July and August, 1993. U.S. Fish and Wildlife Service, Anchorage, AK. (4) Kuletz, K.J., et al. Information needs for habitat protection: marbled murrelet habitat identification. 1994. (5) Characterization of the upland nesting habitat of the marbled murrelet in the <i>Exxon Valdez</i> spill area. Late season surveys, sites at the heads of bays, low elevations, high percentages of forest cover, and large trees were all consistent predictors of high murrelet activity. Radar performed better than humans in detecting murrelets and was cheaper than boat-based or ground-based surveys by humans. About 995 km of shoreline and 117 km² of uplands were surveyed for anadromous fish streams on private lands on the lower Kenai Peninsula and in Prince William Sound, resulting in discovery of 186 anadromous streams totaling about 57 km. Stream habitat parameters were collected along all streams, upper extents of anadromous distribution were documented and streams were mapped by GIS.	Evolved from R15 and R47. Also related to 93045. Project closeout in FY 94 as 94505 and in FY95 as 95505B.

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93053	Hydrocarbon Database	NOAA	No report required.	Continuing project with updating and quality control of hydrocarbon data. Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.	Continued as 94290. This project supports most restoration projects.
93057	Damage Assessment GIS	ADNR	No report required.	Cataloged and plotted over 160 maps for public access at OSPIC. Provided mapping and database support for damage assessment studies.	Supported numerous damage assessment projects, including B11, FS13, AW1, and CH1A.
93059	Habitat Identification Workshop	USFS	No report required.	Identified parcels of non-public land containing critical habitat necessary for the recovery of injured resources and services.	
93060	Accelerated Data Acquisition	USFS	No report required.	Collected and organized existing resource data needed for the analysis of private lands in the oil spill area.	
93062	Restoration GIS	ADNR	No report required.	Provided technical mapping and database support for restoration projects. Generated spill area map and land status maps for Kachemak Bay, Seal Bay, and Eyak lands in support of habitat protection data analysis and negotiations. Plotted maps to provide public access to EVOS information.	Supported numerous restoration projects, including 93038, 93063, 93064 and R47.

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93063	Anadromous Stream Surveys	USFS	Project is data analysis and report writing for anadromous stream portion of R105.	See R105.	Started as R105 and continued as 94139.
93064	Imminent Threat Habitat Protection	ADNR	No report required.	See "Opportunities for Habitat Protection/Acquisition" (2/16/93) and "Comprehensive Habitat Protection Process; Large Parcel Evaluation & Ranking, Volume I" (11/30/93). Imminent Threat Evaluation and the first round of Large Parcel Evaluation were completed. \$7.5 million from settlement funds was combined with \$14.5 million from other sources for the purchase of private inholdings in Kachemak Bay. \$29,950,000 was committed from the most recent court request for the initial payment for purchase of private land near Seal Bay on Afognak Island. The total purchase price of this transaction is \$38,700,000 with the balance to be paid in three annual installments.	
93065	Prince William Sound Recreation	USFS ADNR	Report (funded under 94217) submitted to OSPIC; undergoing formatting review.	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project. Recreation Injury Statement (10/93) was incorporated into the Draft Restoration Plan. Final report includes a prioritized list of projects and other recommendations for restoration of recreation in Prince William Sound.	Close-out/report writing funded under 94217.

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93066	Alutiiq Archeological Repository	ADEC	No report required.	Opening ceremony held May 13, 1995.	
93067	Pink Salmon Coded Wire Tag Recovery	ADFG	Redraft of report (funded under 94184) submitted to Chief Scientist November 30, 1995. [NOTE: Final report accepted by Chief Scientist February 9, 1996.]	Sharr, S., and Peckham, C.J. 1993. Coded wire tag recoveries from pink salmon in PWS fisheries. Reduced commercial exploitation of damaged wild pink salmon populations through timely inseason estimates of hatchery and wild contributions to harvest. Accurate and timely stock composition estimates were used by fisheries managers to justify restriction of fishing fleet to areas where interception of damaged wild populations in mixed-stock fisheries could be minimized.	Started as FS3 and continued as R60A, 94184 (report preparation) and 94320B.
93068	Non-Pink Salmon Coded Wire Tag Recovery	ADFG	1993 results will be included in report being prepared under 94137. See 94137 for status.	See 94137. Timely and accurate inseason estimates of hatchery and wild stock contributions to commercial harvest for improved management of wild stocks in mixed-stock fisheries.	Evolved from FS3; continued as 94137.
93AD	Administrative Director's Office		No report required.		
93FC	Financial Committee		No report required.		
93RT	Restoration Team Support		No report required.		

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94007	Site Specific Archaeological Restoration	ADNR	The results of this project will be presented in two reports (funded under 95007A): (1) Site protection plan accepted by OSPIC; copies currently being made. [NOTE: Available to public January 1996.] (2) ANNUAL REPORT OVERDUE. [NOTE: Annual report submitted to Chief Scientist for peer review February 12, 1996.]	(1) Bittner, J.E. and D.R. Reger. 1995. The 1994 EVOS report, spill area site and collection plan. ADNR, Anchorage, Alaska. (2) Monitoring: ADNR monitored seven sites on Shuyak Island and Outer Kenai Coast (including three at Nuka Island) and found oil but no evidence of new disturbance. USFWS monitored six sites on Afognak Island and found no indication of new vandalism. NPS monitored two sites, McArthur Pass in Kenai Fjords National Park and Cape Gull on the Katmai coast, and found no new damage. Data Recovery: USFS began restoration of two sites in PWS: SEW-440 and SEW-448. Site Protection Plans: ADNR compiled information about the need for site protection, with emphasis on adequate curation of collections in the spill area.	Continuation of 93006.
94020	Black Oystercatcher Interaction with Intertidal	DOI	Project is close-out/report writing for 93035.	See 93035.	Close-out/report writing for 93035.

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94039	Common Murre Population Monitoring	DOI/FWS	Draft final report (funded under 95039) peer reviewed; returned to PI for revision November 14, 1995.	Roseneau, D.G., A.B. Kettle, and G.V.Byrd. Common murre restoration monitoring in the Barren Islands, Alaska in 1994. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK In 1994, complete censuses and replicate index plot counts were made at the East Amatuli Island-Light Rock and Nord Island murre colonies. Although a marginally significant increasing trend was found over the 6-year post-spill period at one 2-plot index area at East Amatuli Island-Light Rock, no significant trends were detected in the other 1989-1994 East Amatuli Island-Light Rock and Nord Island population data sets. Productivity was high (0.7 fledglings per nest site) and within normal bounds, compared with other colonies.	Begun as R11; continued as 93022. Close-out/report writing under 95039.

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94041	Introduced Predator Removal from Islands	DOI/ FWS	Annual report accepted by OSPIC; copies currently being made.	Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK. Removed 33 arctic foxes from Simeonof Island (no more believed remaining); removed 3 arctic foxes from Chernabura Island (population appeared to be dying out naturally). Censused populations of black oystercatchers and pigeon guillemots on above islands as well as on nearby islands with no foxes (controls). No oystercatcher nests found on fox islands; densities of both oystercatchers and guillemots are much less on fox islands than on fox-free ones. Recovery of nesting populations of oystercatchers and guillemots is expected to begin in 1995 on Simeonof and Chernabura islands.	
94043A1	Eshamy River Restoration (W. PWS)	USFS	Project discontinued.		

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94043A2	Gumboot Creek Restoration (W. PWS)	USFS	No report required (NEPA only).		NOTE: Also known as Gunboat Creek.

EA completed and decision notice signed July 27, 1995.

94043A3	Stream No. 508 Restoration	USFS	Project discontinued.		
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94043A4	Stream No. 509 Restoration (W. PWS)	USFS	Project discontinued.		
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94043A5	Otter Creek/Lake Restoration (Knight I.)	USFS	No report required (NEPA only).		
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EA completed and decision notice signed June 28, 1995.

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94043A6	Miners Creek/Lake Restoration (N. PWS)	USFS	Project discontinued.		
94043A7	Shrode Creek/Lake Restoration (W. PWS)	USFS	No report required (NEPA only).		
EA completed and decision notice signed June 28, 1995.					
94043B1	Sockeye Creek/Lake Restoration (Knight I.)	USFS	No report required (NEPA only).		
EA finalized and signed. EA concluded that Sockeye Creek is not a cost effective site for this project at this time.					
94043B2	Rocky Creek/Bay Restoration (Montague)	USFS	Final report submitted to Chief Scientist for peer review November 3, 1995. [NOTE: Final report peer reviewed and returned to PI for revision January 6, 1996.]		

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94064	Harbor Seal Habitat Use and Monitoring	ADFG	Annual report (which includes results of 94320F) accepted by OSPIC; copies currently being made. [NOTE: Available to public January 18, 1996.] NOTE: Project also includes report writing funds for 93046.	Frost, K., et al. 1995. Habitat use, behavior, and monitoring of harbor seals in PWS, AK. ADF&G. Twenty-six seals caught and sampled September 1994 (blood, whiskers for stable isotopes, blubber for fatty acids, skin for genetics, measurements). Twelve of these instrumented with satellite-linked time-depth recorders (6 adults, 6 subadults). Aerial surveys conducted during molting period in September. Preliminary survey analysis suggests no marked increase or decrease since 1993. Eight SLTDRs functioning on 11/10/94. Most seals remain local in PWS; one subadult in Gulf of Alaska.	Started as MM5; continued as R73, 93046, and 95064.
94066	Harlequin Duck Recovery Monitoring	ADFG	Project is close-out/report writing for 93033. See 93033.		Close-out/report writing for 93033.

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94086	Herring Bay Experimental and Monitoring Studies	ADFG	Annual report submitted to Chief Scientist August 30, 1995; under peer review. [NOTE: Annual report peer reviewed February 1996; not yet at OSPIC.]		Population dynamics portion of 93039.
Four field trips were conducted in 1994 for data and sample collections. Data was collected for population dynamics, barnacle recruitment, and water circulation studies.					
94090	Mussel Bed Restoration and Monitoring	NOAA	Annual report submitted to Chief Scientist October 6, 1995; undergoing peer review. Annual report accepted by OSPIC; available to public.	Babcock, M.M., P.M. Harris, S.D. Rice, R.J. Bruyere, and D.R. Munson. 1995. Recovery monitoring and restoration of oiled mussel beds in Prince William Sound, AK. NOAA/NMFS, Juneau, AK	CH1B and 93036. Continued as 95090.
Twelve mussel beds were cleaned and restored in 1994.					
94092	Killer Whale Recovery Monitoring	NOAA	Project is close-out/report writing for 93042. See 93042 for status.	See 93042.	Continuation of 93042.

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94102	Marbled Murrelet Prey and Foraging Habitat in Prince William Sound	DOI/FWS	Final report (funded under 95102) accepted by Chief Scientist. Not yet at OSPIC.	Kuletz, K.J., D.K. Marks, R. Burns, and L. Prestash. Marbled murrelet foraging patterns and habitat use during the breeding season in PWS. Forty-seven murrelets were radio-tagged. Foraging ranges were obtained by tracking birds with boats and planes. Birds foraged up to 60 kms. from their nests (average 10 km.). The average distance from shore was 0.6 km.	R15, 93051, 95102
94110	Habitat Protection - Data Acquisition and Support	ADNR	No report required.	See Habitat Protection Working Group, "Comprehensive Habitat Protection Process; Large Parcel Evaluation and Ranking" Volumes I and II (November 2, 1994 Supplement).	Close-out under 95110-CLO.
94126	Habitat Protection and Acquisition Fund	ADNR	No report required.		94110

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94137	Stock Identification of Chum, Sockeye, Chinook, and Coho in PWS	ADFG	Report, (funded under 95137) which will include results of 93068, being drafted.		Evolved from FS03; continued as 93068 and 95137.
				Scanned approximately half a million sockeye salmon and 1/3 million chum salmon in PWS for tags. Results of sockeye tag recoveries were used to manage fisheries in western PWS. Interception of Coghil Lake-bound wild fish was kept to a minimum.	
94139A1	Waterfall Creek Bypass Instream Restoration	ADFG	No report required (project carried forward as Project 95139A1).		94043, carried forward as 95139A1
94139A2	Port Dick Spawning Channel	ADFG	No report required (project carried forward as 95139A2).		

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94139B1	Otter Creek Bypass Instream Restoration	USFS	Annual report accepted by OSPIC; available to public.	Wedemeyer, K., et al. 1995. Instream habitat and stock restoration for salmon, Otter Creek barrier bypass subproject. USDA Forest Service, Chugach N.F., Anchorage, AK	95139B
Otter Creek bypass rehabilitation completed.					
94139B2	Shrode Creek Bypass Instream Restoration	USFS	Annual report accepted by OSPIC; available to public.	Wedemeyer, K., et al. 1995. Stream habitat and stock restoration for salmon, Shrode Creek barrier bypass subproject. USDA Forest Service, Chugach N.F., Anchorage, AK	95139B
Shrode Creek bypass renovation completed.					
94139C1	Montague Island Chum Instream Restoration	USFS	Annual report submitted to Chief Scientist November 30, 1995; under peer review.	Schmid, D., et al. 1995. Montague Island chum salmon restoration. USDA Forest Service, Chugach N.F., Cordova, AK	95139C1
Project completed for three streams on Northern Montague Island. This project completed 32 structures and 15 acres of thinning.					

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94139C2	Lowe River (6.5 Mile) Instream Restoration	ADFG	No report required (project carried forward as Project 95139C2).		95139C2
94159	Marine Bird & Sea Otter Boat Surveys	DOI	Final report approved by OSPIC; available to public.	Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of PWS, Alaska: Trends following the T/V <i>Exxon Valdez</i> oil spill.	Began as B2; continued as 93045.
				Estimated 320,470 plus-or-minus 63,640 marine birds in PWS in March 1994. Goldeneye and merganser populations may still be showing effects from oil spill. They are both increasing faster in the unoiled area than in the oiled area.	

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94163	Forage Fish Influence on Recovery of Injured Species	NOAA, ADFG	The results of this project will be presented in two reports: (1) <u>ADFG</u>: Annual report submitted to Chief Scientist October 3, 1995; under peer review. [NOTE: ADFG report peer reviewed February 20, 1996.] Annual report submitted to OSPIC; undergoing formatting review. (2) <u>NOAA</u>: Annual report accepted by OSPIC; available to public.	(1) Willette, M. (2) Tyler, A., et al. Forage fish study in PWS, AK. UAF/NMFS. Appendix by B. Ostrand, USFWS/DOI. <u>NOAA</u>: August cruise: (a) Hydroacoustic data showed fish schools mainly in the more shallow water regions near the bottom; fish appeared absent from mid-water layers over the deep passages. November cruise: (a) Temperature-depth profiles for open areas of PWS showed surface temperature 7.0C, warming to 9.0C at 50m depth. Water cooled to 5.0C with further increase in depth. Salinity gradually increased through this depth range, indicating little mixing of the water column and that cooling was occurring from the surface downward due to cold air temperatures. Over the shallow shelf areas the profiles were different, being at 8.0C and mixed to 70m. (b) Five stations were sampled for invertebrate forage species, with euphausiids the abundant crustacean at most stations. (c) Hydroacoustic analysis showed fish mainly located above the temperature maximum at depths of 20 to 40 meters (net sampling showed these fish were young herring mixed with young pollock). Hydrographic data indicated fish aggregations were at temperatures of 7.0 to 7.5C. A second layer of fish was seen near the bottom (likely adult pollock). <u>ADFG</u>: pproximately 1,500 stomach samples collected for analysis of diet overlap. Found Pacific herring, walleye pollock, and juvenile chum salmon common and widespread throughout western PWS.	Integrate with Projects 94320 (PWS System Investigation), 94102 (Murrelet Prey), and 94173 (Pigeon Guillemot).

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94165	Herring Genetic Stock Identification in Prince William Sound	ADFG	Project deferred to FY 95 (95165).		95165
94166	Herring Spawn Deposition and Reproductive Impairment	ADFG, NOAA	The results of this project will be presented in two reports: (1) ADFG annual report submitted to Chief Scientist November 20, 1995. (2) NOAA annual report submitted to Chief Scientist October 25, 1995; under peer review. [NOTE: Annual report peer reviewed February 1, 1996.] Annual report accepted by OSPIC; available to public.	(1) Wilcock, et al (2) Carls, M.G., S.D. Rice, and R.E. Thomas. 1995. Impact of exposure of adult pre-spawn herring (<i>Clupea harengus pallasii</i>) on subsequent progeny. NOAA/NMFS, Juneau, AK Adult herring biaccumulated hydrocarbons, including ovarian tissue and ova. Adults were stressed by oil when VHS was present; VHS prevalence was correlated with PAH concentration. Eggs and larvae were not impacted by parental exposure to hydrocarbons. Factors unaffected included egg fertility, time of hatch, survival, larval stage at hatch, swimming ability, morphology, chromatid separation, and number of mitotic figures.	Coordinating with USFS regarding avian predation (94320Q).

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94173	Pigeon Guillemot Recovery Monitoring	DOI/ FWS	Final report approved by OSPIC; available to public.	Hayes, D. L. 1995. Recovery monitoring of pigeon guillemot populations in PWS, Alaska. USFWS, Anchorage, AK.	Continued from 93034.
				Found evidence of predation on eggs and chicks on Naked Island and abandonment of eggs on Jackpot Island. On Naked Island, gadids were much more prevalent and sandlance much less prevalent in the diet of chicks in 1994 than in 1979-81. Herring or smelt accounted for ca. 32% of prey items delivered to chicks at Jackpot Island, but only ca. 1% at Naked Island.	
94184	Coded Wire Tag Recoveries from Pink Salmon in PWS	ADFG	Project is close-out/report writing for 93067.	See 93067.	Began as FS3. Continued as R60A, 93067, and 94320B.
94185	Coded Wire Tagging of Wild Pinks for Stock Identification	ADFG	Project discontinued.		

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94191	Oil Related Egg and Alevin Mortalities	ADFG, NOAA	The results of this project will be presented in two reports: (1) ADFG annual report submitted to Chief Scientist November 13, 1995; undergoing peer review. (2) NOAA annual report accepted by OSPIC; available to public. (NOTE: Project also includes report writing funds for R60C and 93003.)	(1) Oil related egg and alevin mortalities. (2) Heintz, R.A., S.D. Rice, and J.W. Short. 1995. Injury to pink salmon eggs and pre-emergent fry incubated in oiled gravel (laboratory study). NOAA/NMFS, Juneau, AK <u>ADFG</u> - Collected gametes from 8 controlled and 8 oiled streams. These eggs are now being incubated and will be analyzed in 1995. <u>NOAA</u> - 1992 brood died from bacterial kidney disease. 1993 brood emerged from incubators by 5/15/94. 18,000 fish were coded wire tagged and released May 1994; 14,000 fish were retained for PIT tagging later in the summer. Dose-related differences in growth and size of 1992 brood year observed in October 1993 were not as apparent in April 1994. Embryo survival to the development of the eye and emergence from substrate were measured in 1993 brood year, and clear relationship was observed between dose and survival to both developmental stages. During emergence period, inspected over 50,000 newly emerged fry for visible lesions and observed a dose relationship with the proportion of fish displaying edema.	Began as FS02 and R060C; continued as 93003.

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94199	Institute of Marine Science - Seward Improvements	ADFG	No report required.		Continued as 95199-CLO.
				Record of Decision signed by DOI, DOA (USFS), and NOAA October 31, 1994. Capital funding approved by Trustee Council November 2, 1994, subject to Executive Director's approval.	
94217	Prince William Sound Area Recreation Implementation	USFS	Project is close-out/report writing for 93065.	See 93065.	Close-out of 93065.
94244	Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance	ADFG	Annual report submitted to Chief Scientist November 13, 1995; under peer review. [NOTE: Annual report peer reviewed January 6, 1996; not yet at OSPIC.] (NOTE: Report also contains results from 95244.)	Fall, J. 1995. Harbor seal (<i>Phoca vitulina</i>) and sea otter (<i>Enhydra lutrus</i>) cooperative subsistence harvest assistance. ADF&G A harbor seal/sea otter restoration workshop took place in Anchorage December 2, 1994. It was attended by more than thirty people, including representatives from eight communities which use marine mammals for subsistence. A second workshop took place on March 2, 1995.	Continued as 95244.

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94246	Sea Otter Recovery Monitoring	DOI	Project is close-out/report writing for 93043. See 93043.		Close-out/report writing for 93043.
94255	Kenai River Sockeye Salmon Restoration	ADFG	Annual report accepted by OSPIC; copies currently being made. [NOTE: Available to public January 18, 1996.]	Tarbox, K.E., R.Z. Davis, L.K. Brannian, and S.M. Fried. 1995. Kenai River sockeye salmon restoration. ADF&G, Soldotna, AK.	Began as R53; continued as 93012 and 93015.
94258	Sockeye Salmon Overescapement	ADFG	Annual report submitted to Chief Scientist November 29, 1995; under peer review. NOTE: Project also includes report writing funds for 93002.	Skilak weight of fall predictive on both escapements and fall fry abundance. 1994 fall fry had low abundance and weight. Lipid comparisons of similar length fall fry from Tustumena and Skilak indicated Skilak fall fry entered winter in poor condition in 1993. 1995 adult return needed to define magnitude and duration of reduced sockeye production.	

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94259	Coghill Lake Sockeye Salmon Restoration	ADFG	Annual report accepted by OSPIC; copies currently being made. [NOTE: Available to public January 18, 1996.]	Edmundson, J.A., G.B. Kyle, and S.R. Carlson. 1995. Restoration of Coghill Lake sockeye salmon: 1994 annual report on nutrient enrichment restoration. ADF&G, Soldotna, AK. Estimated 900,000-1,800,000 smolts outmigrated this year. Escapement approximately 7,200 adults. Response of phytoplankton to liquid fertilizer applications suggests fertilizer is not being lost to the anaerobic layer, but is actually improving the productivity of Coghill Lake.	Began as 93024.
94266	Shoreline Assessment and Oil Removal	ADEC	The results of this project will be presented in two reports: (1) <u>DOI/NBS</u> : Draft final report peer reviewed and returned to PI for revision June 14, 1995. Redraft will be submitted once chemical analyses are complete. (2) <u>ADEC</u> : FINAL REPORT OVERDUE. Delay due in part to resignation of PI. Expected submittal date is March 29, 1996.		
94272	Chenega Chinook Release Program	ADFG	Annual report peer reviewed November 14, 1995. Not yet at OSPIC.	50,300 chinook smolts released at Crab Bay on 5/27/94. Chenega residents reared and fed smolts in net pens prior to release.	Continuation of 93016.

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94279	Subsistence Food Safety Testing	ADFG	Annual report submitted to Chief Scientist November 29, 1995; under peer review.	Miraglia, R. Subsistence restoration project: food safety testing.	Continuation of 93017.
				Test results on final fish and shellfish samples received from NMFS lab. All results so low as to be within margin of error for tests. Seal samples from Tatitlek and duck samples from Chenega Bay were collected by ADFG with assistance from local subsistence hunters. Test results found hydrocarbon contamination was at background levels.	
94285	Subtidal Sediment Recovery Monitoring	NOAA	Annual report submitted to Chief Scientist October 6, 1995; under peer review. Annual report accepted by OSPIC; available to public. (NOTE: Project also includes report writing funds for 93047.)	O'Clair, C.E., J.W. Short, and S.D. Rice. 1995. Subtidal monitoring: recovery of sediments in the Northwestern Gulf of Alaska. NOAA/NMFS, Juneau, AK.	Continuation of ST2A and 93047. Continued as 95106.
94290	Hydrocarbon Data Analysis and Interpretation	NOAA	No report required.		Continuation of ST8 and 93053. Continued as 95290.
				In FY94, 2,742 samples were received and several hundred were submitted for analysis.	

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94320A	Salmon Growth and Mortality	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
				Growth rate of juvenile pink salmon in 1994 in PWS slightly above average compared to 1989-1993 period.	
94320B	Coded Wire Tagging Recovery-PWS Pinks	ADFG	Annual report peer reviewed October 13, 1995. Not yet at OSPIC.	Sharr, S., et al. 1994. Coded wire tag recoveries from pink salmon in PWS salmon fisheries. ADF&G.	Continued as 96186.
				Common property fisheries: 26.2 million caught, 4.4 million scanned (17%), 3,600-4,000 tags recovered. Hatchery revenue sales: 10.4 million caught, 2 million scanned (19%), 1,600 tags recovered. Scanned close to 100% of brood stock from PWS salmon hatcheries. Used results of in-season analysis, based on detection of tags, for critical management decisions regarding fishing areas and times. Ability to detect wild stock shortfalls and high abundance of hatchery fish contributed to meeting restoration goals.	

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94320C	Otolith Mass Marking of PWS Pink Salmon	ADFG	Annual report submitted to Chief Scientist March 31, 1995; under peer review.		Continued as 96188.
				Feasibility study initiated at PWSAC Cannery Creek Hatchery. Approximately 50,000 fry were immersed for different lengths of time and at different temperatures to determine optimum treatment for marking effectiveness and survival. Completed examination of otoliths subjected to varying levels of oxytetracycline and varying temperatures at ADFG lab. Marking was not successful for any of the treatment groups.	
94320D	Pink Salmon Genetics	ADFG	ANNUAL REPORT OVERDUE. [NOTE: 1/31/96 PI requested extension of due date to April 15, 1996 and that publication manuscript serve as annual report. This request is under review by Chief Scientist.]		94184, 94191
				In ADFG lab, DNA data show upstream and intertidal spawners in the same stream genetically differ. Have also found that mainland and island populations genetically differ.	

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94320E	Salmon Predation	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
				Walleye pollock, adult pink salmon, Pacific herring, and dolly varden trout identified as important predators on juvenile salmon in Prince William Sound.	
94320F	Harbor Seals-Trophic Interactions	ADFG	Data/findings integrated into report prepared on 94064. See 94064 for status.	See 94064.	94064. Combined with 95064 for 1995.
				Preliminary fatty acid analysis of blubber samples indicates several distinct feeding patterns. Some seals appear to eat plankton-eating fishes and others piscivorous fishes/prey such as pollock and squid. Stable isotope analysis indicates different feeding patterns for subadults and most adults. Adult females in particular show a strong annual shift in prey.	
94320G	Phytoplankton and Nutrients	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		

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94320H	Role of Zooplankton in PWS Ecosystem	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		95320H
				Time series of zooplankton biomass tracks predation on 0-class fish in April, May, and June.	
94320I	Food Web Dependencies in PWS Ecosystem/Stable Isotopes	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
				<u>Food Web of Fishes</u> - Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations). <u>Marine Mammal Trophic Energetics</u> - Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker.	
94320J	Information Systems and Model Development	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		

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94320K	PWSAC-Experimental Fry Release	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
Adult pink salmon will return in summer 1995 as a result of 1994 fry release. Marine survivals will be estimated based on coded wire tag data. Rearing and release strategies will be compared and differences in marine survival evaluated between rearing and release groups.					
94320L	PWSAC-Experimental Manipulation	ADFG	Annual report peer reviewed November 14, 1995. Not yet at OSPIC.		
94320M	Physical Oceanography in PWS and Gulf of Alaska	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		

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94320N	Nearshore Fish	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
94320P	SEA Program: Program Management	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		All subprojects of 94320.
94320Q	Avian Predation on Herring Swan	USFS	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Bishop, M.A. 1995. Avian predation on herring spawn. Copper River Delta Institute, USDA Forest Service, Cordova, AK	95320Q

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94320H	Role of Zooplankton in PWS Ecosystem	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		95320H
Time series of zooplankton biomass tracks predation on 0-class fish in April, May, and June.					
94320I	Food Web Dependencies in PWS Ecosystem/Stable Isotopes	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.	<u>Food Web of Fishes</u>- Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations). <u>Marine Mammal Trophic Energetics</u>- Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker.	
94320J	Information Systems and Model Development	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94320K	PWSAC-Experimental Fry Release	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
				Adult pink salmon will return in summer 1995 as a result of 1994 fry release. Marine survivals will be estimated based on coded wire tag data. Rearing and release strategies will be compared and differences in marine survival evaluated between rearing and release groups.	
94320L	PWSAC-Experimental Manipulation	ADFG	Annual report peer reviewed November 14, 1995. Not yet at OSPIC.		
94320M	Physical Oceanography in PWS and Gulf of Alaska	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		

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94320N	Nearshore Fish	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		
94320P	SEA Program: Program Management	ADFG	Consolidated annual report peer reviewed November 14, 1995; not yet at OSPIC.		All subprojects of 94320.
94320Q	Avian Predation on Herring Swan	USFS	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Bishop, M.A. 1995. Avian predation on herring spawn. Copper River Delta Institute, USDA Forest Service, Cordova, AK	95320Q

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94320S	Disease Impacts on Herring	ADFG	Annual report submitted to Chief Scientist July 6, 1995; under peer review. [NOTE: Annual report peer reviewed January 1996; not yet at OSPIC.]	<i>Ichthyophonus hoferi</i> , viral hemorrhagic septicemia virus, and other causes of morbidity in Pacific herring spawning in PWS in 1994. ADF&G. Because of the important of <i>Ichthyophonus</i> in herring morbidity in 1994, all previous Pacific herring sampled from PWS and submitted to UC Davis (1989, 1990, 1991, 1992) were re-screened for <i>Ichthyophonus</i> . Prevalence in these samples was never more than 15% and was distributed fairly evenly among liver, kidney, and spleen, but was never in the olfactory nares.	
94417	Waste Oil Disposal Facilities	ADEC	No report required (project carried forward as 95417).		95417

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94422	Environmental Impact Statement for the Draft Restoration Plan	USFS	No report required.		Continued as 95422.

Final EIS released September 30, 1994. Notice of Availability in Federal Register, Vol. 59, No. 186, p. 49232, dated 9/27/94 and Vol. 59, No. 189, p. 49926, dated 9/30/94. Record of Decision (ROD) signed October 31, 1994. Copies of FEIS available through OSPIC.

94423	Oil Spill Public Information Center (OSPIC)	ALL	No report required.		
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During the quarter ending 12/31/95, OSPIC staff received 417 visitors, responded to 825 requests for information (of which 250 were sent via e-mail from the Web Home Page), processed 44 interlibrary loans, loaned 90 items, distributed 1,430 documents, and acquired 2 books, 6 reports, 3 periodicals, and 1 video, 8 slides, and 1 cd-rom database. 1,136 documents were added to the Trustee Council Administrative Record and 14 Marine Ecosystem posters were sold. OSPIC staff received 19 NRDA/Restoration Project final reports, approved 15, and distributed copies of 19. OSPIC staff received 8 annual reports, approved 7, and distributed copies of 5. On 12/7/95, OSPIC staff installed statistical software to track hits to the Web Home Page; from 12/7 to 12/31, there were 1,603 hits.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94424	Restoration Reserve	ALL	No report required.	The Trustee Council has voted to place a total of \$36 million into a Restoration Reserve fund within the court registry investment system and to invest the funds in laddered securities. Motion to establish the Restoration Reserve has been signed by Judge Holland. However, the funds have not yet been invested.	
94425	Marine Mammal Book	NOAA	No report required.	See Marine mammals and the <i>Exxon Valdez</i>. Loughlin, T.R., editor. 1994. Academic Press, Inc. 395 pages. Book printed and for sale by Academic Press.	
94427	Experimental Harlequin Duck Breeding Survey	ADFG	Annual report submitted to Chief Scientist October 13, 1995; under peer review. [NOTE: Annual report accepted by OSPIC; available to public 1/31/96.]	Rosenberg, D.H. 1995. Experimental harlequin duck breeding survey in Prince William Sound, AK. ADF&G, Anchorage, AK.	B11, R71, 93033, 94066, 95427, and nearshore ecosystem projects.

Exxon Valdez Oil Spill Project Status Summary
1994 Work Plan
Quarter Ending December 31, 1995

<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94428	Subsistence Restoration Planning and Implementation	ADFG	Final report (which also includes results from 95428) submitted to Chief Scientist November 6, 1995; under peer review.	Fall, J.	
94504	Genetic Stock Identification of Kenai River Sockeye	ADFG	Project is close-out/report writing for 93012. See 93012.		Close-out/report writing for 93012.
94505	Information Needs for Habitat Protection	USFS	Findings included in report prepared under 95505B. See 95503B for status.	See 95505B.	Close-out of 93051. 95505B.
94506	Pigeon Guillemot Recovery	DOI	Project is close-out/report writing for 93034. See 93034.		Report writing for 93034.

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Exxon Valdez Oil Spill Project Status Summary
1994 Work Plan
Quarter Ending December 31, 1995

<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94507	Symposium Proceedings Publication	NOAA	No report required. All 61 manuscripts have been peer reviewed, revised, approved, and sent to the publisher (American Fisheries Society, AFS) for format editing. The editors are completing the preface and introduction.	Proceedings will include 61 manuscripts in the following topic areas: fate and toxicity (8 manuscripts), intertidal (10 manuscripts), treatment effects (5), subtidal (3), herring (2), salmon (12), other fish (5), birds (8), mammals (2), archaeology (1), subsistence (4), human impacts (2). The book will probably be over 1200 pages, 50% longer than first estimated.	Continued as 96507.

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Quarter Ending December 31, 1995

<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95001	Condition and Health of Harbor Seals	ADFG Castellini, UAF	Annual report being drafted.		96001
95007A	Archaeological Site Restoration - Index Site Monitoring	ADNR Reger	Annual report being drafted.		
95007B	Archaeological Site Restoration	USFS Yarborough	Final report being drafted.		Report writing funded under 96007B.
95009D	Survey of Octopus and Chiton in Intertidal Habitats	USFS Scheel, PWSSC	Annual report being drafted.		96009D
95012	Comprehensive Killer Whale Investigation	NOAA Matkin	Annual report being drafted.		96012A
95021	Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands	DOI (NBS) Hatch	Final report being drafted.		
95025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI Holland-Bartels	Annual report being drafted.		96025
95025A	Nearshore Package: Project Planning and Development	DOI (NBS) Holland-Bartels	No report required.		96025
95026	Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data	ADEC Braddock	Final report being drafted.		

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95027	Kodiak Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC Piper	Final report being drafted.		
95029	Population Survey of Bald Eagles in PWS	DOI (FWS) Schempf	Final report being drafted.	Bounai, T., Schempf, P., Hodges, J. 1996. Bald eagle populations in PWS, Alaska after the <i>Exxon Valdez</i> oil spill. USFWS/DOI	
95031	Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS	DOI (FWS) Kuletz	Final report being drafted.	Kuletz, K.J., Kendell, S. developing a productivity index for marbled murrelets. USFWS/DOI	Final report funded under 96031.
95038	Symposium on Seabird Restoration	DOI (FWS) Harrison, PSG	Final report, in addition to publication of workshop proceedings, will be submitted. The workshop steering committee will meet to develop a timetable for completion of the report.	Workshop took place September 29-October 2 in Girdwood, AK. Roughly 47 participants from Great Britain, Belgium, France, New Zealand, Japan, Canada, and USA. Primary focus was on common murre, harlequin duck, marbled murrelet, and pigeon guillemot. Achieved workshop goal by discussing seabird restoration in general, then applying the general discussions and conclusions to EVOS.	
95039	Common Murre Productivity Monitoring	DOI (FWS) Roseneau	Project is close-out/report writing for 94039.		94039
95041	Introduced Predator Removal from Islands - Follow-up Surveys	DOI (FWS) Bailey	Final report being drafted. [NOTE: Draft final report submitted to Chief Scientist January 17, 1996; under peer review.]	Byrd, G.V., E.P. Bailey, and W. Stahl. 1996. Introduced predator removal from islands. USFWS/DOI. Homer, AK	

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95043B	Carry-forward: Cutthroat and Dolly Varden Rehabilitation in Western PWS	USFS Wedemeyer	Annual report being drafted.		96043B
95052	Community Interaction/Use of Traditional Knowledge	ADFG Miraglia	Final report being drafted.		96052
95058	Landowner Assistance Program	ADFG Kuwada	No report required.		
95060	Spruce Bark Beetle Impacts	ADEC Loeffler	Final report (literature search) being prepared.		
95064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	ADFG Frost	Annual report being drafted.		96064
95074	Herring Reproductive Impairment	NOAA Rice/Carls	Final report being drafted. Due date extended to June 15, 1996.		Final report funded under 96074.
95076	Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon	NOAA Wertheimer	Annual report being drafted.		96076
95086C	Herring Bay Monitoring and Restoration Studies	ADFG Highsmith, UAF	Data analysis underway for final report.		Final report writing funded under 96086.
95089	Information Management System	ALL Fries	No report required.		
95090	Mussel Bed Restoration and Monitoring in PWS and Gulf of Alaska	NOAA Babcock	Final report being drafted.		Final report funded under 96090.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95093	PWSAC: Restoration of Pink Salmon Resources and Services	ADFG Ferren, PWSAC	Project terminated; no report required.		
95100	Administration, Science Management and Public Information	All	No report required.		
95102-CLO	Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound	DOI (FWS) Kuletz	Project is close-out/report writing for 94102. See 94102 for status.	Kuletz, K.J., et al. 1995. Marbled murrelet foraging patterns in PWS, Alaska.	94102
95106	Subtidal Monitoring: Eelgrass Communities	ADFG Jewett, UAF	Report being drafted. Due date extended to May 30, 1996.		Final report writing funded under 96106.
95110-CLO	Closeout: Habitat Protection and Acquisition	ADNR Fries	No report required.		
95115	Sound Waste Management Plan	ADEC PWSEDC	Final report being drafted.		
95117-BAA	Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation	NOAA Castellini, UAF	Final report being drafted.		
95121	Fatty Acid Signatures of Selected Forage Fish Species in PWS	NOAA Worthy, Texas A&M University	Project not yet authorized for expenditure by Executive Director. Contract awarded May 12, 1995. Statement of work sent to Chief Scientist November 8, 1995; under peer review.		
95126	Habitat Protection and Acquisition Support	ADNR Fries	No report required.		

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95126A	Carry-forward: Habitat Protection and Acquisition Support	ADNR Fries	No report required.		
95127	Tatitlek Coho Salmon Release Program	ADFG Kompkoff, Tatitlek IRA	No report required (project was NEPA only).		96127
95131	Clam Restoration (Nanwalek, Port Graham, Tatitlek)	ADFG Brown-Schwa lenberg, CRRC	The results of this project will be presented in two reports: (1) Beach sampling report submitted to Chief Scientist December 20, 1995; under peer review. (2) Annual report being drafted.		96131
95137-CLO	Closeout: Prince William Sound Salmon Stock Identification and Monitoring Studies	ADFG Fried	Project is close-out/report writing for 93068 and 94137. See 94137 for status.		93068, 94137
95138	Elders/Youth Conference	ADFG Simeone	Conference report completed and distributed to participants. Report needs to be submitted to OSPIC.		
95139	Wild Stock Supplementation Workshop	ADFG Hauser	No report required. (Summation memo prepared by Chief Scientist is on file in Anchorage Restoration Office.)		
95139A1	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Little Waterfall Creek Barrier Bypass	ADFG Honold	Annual report being drafted.		96139A1
95139A2	Port Dick Spawning Channel	ADFG Dudiak	No report required (project was NEPA only).		

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>ReportStatus</u>	<u>References and Results</u>	<u>RelatedProjects</u>
95139B	Closeout: Otter Creek/Shrode Creek Instream Restoration	USFS Olson	Project is close-out/report writing for 94139B1 and 94139B2. See 94139B1 and 94139B2 for status.		94139B1, 94139B2
95139C1	Montague Riparian Rehabilitation	USFS Hodges	Annual report being drafted.		96139C1
95139C2	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Lowe River	ADFG	No report required (project canceled).		
95163A	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (interim funding)	NOAA Duffy (NOAA), Willette (ADFG)	<u>NOAA</u> : No report required. Project is funding for planning of integrated APEX/ ecosystem project. <u>ADFG</u> : Project is funding for close-out/report writing for 94163; see 94163 for status of annual report. A final report will also be prepared by ADFG. Delayed due date of August 15, 1996 requested for final report; this request is under review by the Executive Director.		
95163A1	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (APEX)	NOAA Haldorson	Annual report being drafted.		96163
95163B	Foraging of Seabirds (APEX)	DOI Ostrand	Annual report being drafted.		96163
95163C	Fish Stomach Contents Analysis (APEX)	NOAA Sturdevant	Annual report being drafted.		96163
95163D	Tufted Puffin Foraging and Reproductive Success (APEX)	DOI Piatt	Annual report being drafted.		See 96163.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>ReportStatus</u>	<u>References and Results</u>	<u>RelatedProjects</u>
95163E	Reproduction and Foraging of Black-legged Kittiwakes (APEX)	DOI (FWS) Irons	Annual report being drafted.		96163
95163F	Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding)	DOI (FWS) Hayes	Project is close-out/report writing for 94173. See 94173 for status.		94173
95163F1	Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX)	DOI Hayes	Annual report being drafted.		96163
95163G	Seabird Energetics (APEX)	NOAA Roby	Annual report being drafted.		96163
95163I	Seabird/Forage Fish Interaction: Program Management and Integration	DOI (FWS) Duffy	Annual report being drafted.		96163
95163J	Barren Islands Seabird Studies (APEX)	DOI Roseneau	Annual report being drafted.		96163
95163K	Using Predatory Fish to Sample Forage Fish (APEX)	DOI Roseneau	Annual report being drafted.		96163
95163L	Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/ Distribution of Forage Fish in Barren Islands (APEX)	DOI Piatt	Annual report being drafted.		96163
95165	PWS Herring Genetic Stock Identification	ADFG J. Seeb	Annual report being drafted.		96165

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95166	Herring Natal Habitats	ADFG Carpenter, Willette	Annual report being drafted.		96166
95191A	Investigating and Monitoring Oil Related Egg and Alevin Mortalities	ADFG J. Seeb, Bue	1/30/96 PI requested that manuscripts serve as annual report; this request is under review by the Chief Scientist.		96191A
95191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA Rice	Annual report being drafted.		96191B
95199-CLO	Institute of Marine Science - Seward Improvements EIS	ADFG Sundberg	No report required.		
95244	Seal and Sea Otter Cooperative Subsistence Harvest Assistance	ADFG Fall	Annual report submitted to Chief Scientist November 13, 1995; under peer review. Report also includes findings from 94244.		94244, 96244
95255	Kenai River Sockeye Restoration	ADFG L. Seeb, Tarbox	Annual report being drafted.		96255
95258	Sockeye Salmon Overescapement (Kenai/Kodiak)	ADFG Schmidt	Annual report being drafted.		96258
95259	Restoration of Coghill Lake Sockeye	ADFG Kyle	Annual report being drafted.		96259
95266	Experimental Shoreline Oil Removal	ADEC Piper	Final report (workshop proceedings) being drafted.		

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95272	Chenega Chinook Release Program	ADFG Lindley, PWSAC	Annual report being drafted.		96272
95279	Subsistence Restoration Project - Food Safety Testing	ADFG Miraglia	Final report being drafted.		
95285-CLO	Closeout: Subtidal Sediment Recovery Monitoring	NOAA	Project is close-out/report writing for 94285. See 94285 for status.		94285
95290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance for Restoration and NRDA Environmental Samples Associated with the <i>Exxon Valdez</i> Oil Spill	NOAA Short	No report required.		96290
95320A	Salmon Growth and Mortality	ADFG Willette	Annual report being drafted.		96320
95320B	PWS Pink Salmon Stock Identification and Monitoring (CWT)	ADFG Joyce	Annual report being drafted.		96320
95320C	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS	ADFG Joyce	Annual report being drafted.		96320
95320D	PWS Pink Salmon Genetics	ADFG J. & L. Seeb	1/30/96 PI requested that manuscripts prepared for publication serve as annual report; this request is under review by the Chief Scientist. Manuscripts would also include results from 94320D.		96320
95320E	Juvenile Salmon and Herring Integration	ADFG Willette	Annual report being drafted.		96320

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
95320G	Phytoplankton and Nutrients	ADFG McRoy & Eslinger, UAF	Annual report being drafted.		96320
95320H	Role of Zooplankton in the PWS Ecosystem	ADFG Cooney, UAF	Annual report being drafted.		96320
95320I	Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds)	ADFG Schell	Annual report being drafted.		96320
95320I(2)	Isotope Tracers - Food Webs of Fish	ADFG Kline, UAF	Annual report being drafted.		96320
95320J	Information Systems and Model Development	ADFG Patrick, PWSSC	Annual report being drafted.		96320
95320K	PWSAC: Experimental Fry Release	ADFG Ferren & Lindley, PWSAC	Annual report being drafted.		96320
95320M	Observational Physical Oceanography in PWS and the Gulf of Alaska	ADFG Vaughn, PWSSC	Annual report being drafted.		96320
95320N	Nearshore Fish	ADFG Thomas, PWSSC	Annual report being drafted.		96320

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>ReportStatus</u>	<u>References and Results</u>	<u>RelatedProjects</u>
95320Q	Avian Predation on Herring Spawn	USFS Bishop	Annual report being drafted.		96320Q
95320S	Disease Impacts on PWS Herring Populations (competitive solicitation under State of Alaska two-step, RFQ-RFP process)	ADFG Hauser	Annual report being drafted.		96320
95320T	Juvenile Herring Growth and Habitat Partitioning	ADFG Norcross	Annual report being drafted.		96320
95320U	Somatic and Spawning Energetics of Herring/Pollock	ADFG Paul, UAF	Annual report being drafted.		96320
95320Y	Variation in Local Predation Rates on Hatchery-Released Fry	ADFG Scheel, PWSSC	Annual report being drafted.		96320
95417	Carry-forward: Waste Oil Disposal Facilities	ADEC	No report required (project canceled).		
95422-CLO	Closeout: Restoration Plan EIS/Record of Decision	USFS	No report required.		
95424	Restoration Reserve	All All	No report required.		
95427	Harlequin Duck Recovery Monitoring	ADFG Rosenberg	Annual report being drafted.		96427
95428-CLO	Closeout: Subsistence Planning Project	ADFG Fall	Final report submitted to Chief Scientist November 6, 1995; under peer review. Report also includes findings from 94428.		94428

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>ReportStatus</u>	<u>References and Results</u>	<u>RelatedProjects</u>
95505B	Data Analysis for Stream Habitat	USFS Olson	Final report accepted by OSPIC; available to public. Report also includes findings from 93051 and 94505.	Olson, R.A., 1995. Use of aerial photograph, channel-type interpretations to predict habitat availability in small streams, USDA, Forest Service, Chugach N.F., Anchorage, AK	93051, 94505

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<u>Project #</u>	<u>Project Title</u>	<u>Lead Agency/ P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96001	Recovery of Harbor Seals from EVOS: Condition and Health Status	ADFG Castellini/UAf	On file, review complete	CE on file (95001)	On file	<u>Oct - Dec:</u> DONE: Analysis and statistical study of fall blood samples DONE: Analysis of blubber water content <u>Jan - Mar:</u> Modeling of body morphometrics First collection of field samples outside of PWS <u>Apr - June:</u> Second collection of field samples outside of PWS Analysis of all blood samples <u>July - Sept:</u> Modeling of body morphometrics and blubber data, and body condition indices Second collection of field samples inside PWS
96007A	Archaeological Index Site Monitoring	ADNR Reger/ADNR	On file, review complete	CE on file	On file	<u>Oct - Mar:</u> DONE: Complete requirements for final approval of project including NEPA compliance <u>Apr - June:</u> Obtain field supplies, schedule field trips <u>July - Sept:</u> Conduct field visits to sites and preliminary reports of activities
96007B	Site Specific Archaeological Restoration	USFS Yarborough/US FS	On file, review complete	Report writing only	On file	<u>Oct - Dec:</u> DONE: Analysis of field data and specialists reports <u>April 15:</u> Final report due

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<u>Project #</u>	<u>Project Title</u>	<u>Lead Agency/ P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96009D	Survey of Octopuses in Intertidal Habitats	USFS Scheel/PWSSC	On file; review complete	CE on file (95009D)	On file	<u>Oct - Dec:</u> Hire personnel, arrange insurance or dive contracts, advertise and award contract vessel charters, initial sit visits to new sites <u>Jan - Mar:</u> DONE: Report results of FY95 to subsistence users in Tatitlek and Chenega Bay Begin field work including tag-recapture and SCUBA sampling monthly <u>Apr - June:</u> Continue tag-and-recapture and SCUBA sampling monthly Conduct habitat sampling at multiple sites at the end of June <u>July - Sept:</u> Final recapture of tagged octopus; last SCUBA survey
96012A-BAA	Comprehensive Killer Whale Investigation in Prince William Sound, Alaska	NOAA Matkin/N Gulf Oceanic	On file; review complete	CE on file (95012)	On file	NO ACTIVITY SCHEDULED THIS QUARTER <u>Jan-Mar:</u> Enter and tabulate available data <u>Apr-June:</u> Grid data, calculate sightings Examine dietary overlap <u>July-Sept:</u> Field work (monitoring) Analyze distribution of foraging behavior Estimate total predation on harbor seals Complete population separation using genetic techniques Finalize GIS/predation work
96025	Mechanism of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI Holland-Bartels et al	On file; review complete	CE on file;EA on file for harlequins	On file	NO UPDATE PROVIDED

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<u>Project #</u>	<u>Project Title</u>	<u>Lead Agency/ P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96027	Kodiak Archipelago Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC Piper/ADEC	On file; review complete	CE on file (95027)	On file	<u>Oct - Dec:</u> UNDERWAY: Draft report <u>Jan - Mar:</u> Report to general public; community meetings. <u>April 15:</u> Final report due.
96031	Development of a Productivity Index to Monitor the Reproductive Success of Marbled and Kittlitz's Murrelets in Prince William Sound, Alaska	DOI Kuletz/DOI	On file; review complete	Report writing only	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>April 15</u> Submit draft report
96038	Publication of Seabird Restoration Workshop	DOI Pac Seabird Group	On file; review complete	Report writing only	On file	<u>Oct - Dec:</u> DONE: Drafts of workshop discussions submitted <u>Jan - Mar:</u> Preparation of review articles based on recommendations of workshop attendees White papers and workshop discussion papers revised by authors based on information and opinions from reviews <u>April 15:</u> Final report due <u>July - Sept:</u> Final drafts submitted to editors for publication in articles in a journal or chapters in a book
96043B	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures	USFS Gillikin/USFS	On file; review complete	EA/FONSI on file (95043B)	On file	<u>Oct - Dec:</u> UNDERWAY: Report on preliminary finds of population and distribution estimations. NOTE: Preliminary results indicate population estimates may not be determined with present data. <u>July - Sept:</u> Inspect and measure effects of installed structures Conduct population estimates

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<u>Project #</u>	<u>Project Title</u>	<u>Lead Agency/ P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96048-BAA	Historical Analysis of Sockeye Salmon Growth Among Populations Affected by Overescapement in 1989	NOAA NRC, Inc.	On file; review complete	CE on file	On file	NO ACTIVITY; PROJECT NOT YET CONTRACTED <u>Oct - Dec:</u> Collect and press scales <u>Jan - Mar:</u> Age scales and select scales for measurement Measure scales <u>July - Sept:</u> Analyze data Prepare report
96052	Community Involvement & Use of Traditional Knowledge	ADFG/Miraglia ChugachRRC	On file; review complete	CE on file	On file	<u>Oct-Dec:</u> DONE: ADFG and CRRC enter into contract for coordination of facilitator network DONE: MOU drafted between ADFG and CRRC DONE: Spill Area Wide Coordinator hired Guidelines/protocols developed for TEK Identification of injured species for TEK <u>Jan-Mar:</u> DONE: Facilitator network in place and operating Begin work on TEK database DONE: Training workshop for local community facilitators <u>Apr-June:</u> Training workshop for local community facilitators

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<u>Project #</u>	<u>Project Title</u>	<u>Lead Agency/ P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in Prince William Sound	ADFG Frost/ADFG	On file; review complete	CE on file (95064)	On file	<u>Oct - Dec:</u> DONE: Retrieve ARGOS data DONE: Analysis of fatty acid samples and aerial survey data DONE: Analysis of genetic samples Meet with hunters about study results, distribute newsletter Meet with SWFSC regarding genetics analyses <u>Jan - Mar:</u> Order SLTDRs for field season Coordination meeting with other ADFG harbor seal projects Arrange logistics (boats, airplanes, equipment, contracts, supplies) Reserve ARGOS satellite channels <u>Apr - June:</u> Field work to catch seals and collect sample <u>July - Sept:</u> Analysis of fatty acid samples Conduct aerial surveys during molting Attach 12 SLTDRs, sampling <u>Oct-Dec:</u> DONE: Analyze field data <u>Apr-June:</u> Complete data analysis
96074	Herring Reproductive Impairment	NOAA Rice & Carls/NOAA	On file; review complete	CE on file (95074)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER. <u>Apr-June:</u> Oil exposure of 1995 brood embryos Marking of 1995 brood fry <u>July-Sept:</u> Spawning of 1997 brood adults
96076	Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon	NOAA Wertheimer/NOAA	On file; review complete	CE on file (95076)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER. <u>Apr-June:</u> Oil exposure of 1995 brood embryos Marking of 1995 brood fry <u>July-Sept:</u> Spawning of 1997 brood adults
96086	Herring Bay Monitoring and Restoration Studies	ADFG Highsmith/UAF	On file; review complete	Report writing only	On file	<u>Oct - Mar:</u> UNDERWAY: Lab analysis, data analysis <u>April 15:</u> Final report due

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96090	Mussel Bed Restoration and Monitoring	NOAA Babcock/NOA A	On file; review complete	Report writing only	On file	<u>Oct - Mar:</u> ONGOING: Chemical analyses conducted <u>April 15:</u> Final report due NO UPDATE PROVIDED
96101	Removal of Introduced Foxes From Islands	DOI Ebbert/DOI	On file; review complete	Report writing only	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan - Mar:</u> Submit draft report to Chief Scientist for review <u>Apr 15:</u> Submit final report
96106	Subtidal Monitoring: Eelgrass Communities	ADFG Jewett/UAF	On file; review complete	Report writing only	On file	<u>Oct - Mar:</u> UNDERWAY: Process benthic, sediment, and hydrocarbon samples Data entry and analyses <u>April 15: (NEW DATE OF 6/1/96 AGREED TO)</u> Final report due
96115	Sound Waste Management Plan	ADEC PWS-Econ DC	On file; review complete	Report writing only	On file	<u>Oct-Dec:</u> UNDERWAY: Draft report <u>Jan:</u> PWSEDC report to the Prince William Sound communities recommending solutions for solid waste and marine pollution.
96127	Tatitlek Coho Salmon Release	ADFG Tatitlek IRA	On file; review complete	EA/FONSI on file (95127)	On file	<u>Oct - Dec:</u> DONE: Prepare contract with Tatitlek IRA through PWS Economic Development Council <u>Apr - June:</u> Transport smolt to Boulder Bay and place in net pens Release smolt into Boulder Bay <u>July - Sept:</u> Egg take

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96131	Chugach Native Region Clam Restoration	ADFG ChugachRRC	On file; review complete	CE on file	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan-Mar:</u> Obtain permits and construct and install tidal FLUPSY at Tatitlek Obtain permits and initiate predator control studies on razor clam beaches near Eyak Obtain permits and initiate beach seeding experiments in Tatitlek and Port Graham/Nanwalek <u>Apr-June:</u> Collect broodstock Obtain clearance and transport to hatchery Transfer 5mm seed to hatchery nursery and FLUPSY <u>July-Sept:</u> Conduct baseline shellfish surveys of tidelands near Ouzinkie and Chenega Bay
96139A1	Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass Improvement	ADFG Honold/ADFG	On file; review complete	CE on file (94139A1)	On file	<u>Oct - Dec:</u> DONE: Project construction and oversight <u>Jan - Mar:</u> Egg-to-fry survival sampling <u>Apr - June:</u> Juvenile coho abundance sampling <u>July - Sept:</u> Spawner abundance and distribution surveys
96139A2	Spawning Channel Construction Project Port Dick Creek, Lower Cook Inlet	ADFG Dudiak/ADFG	On file; review complete	EA/FONSI on file	On file	<u>Oct - Mar:</u> Continue groundwater fluctuation measurements Complete environmental assessment Develop engineers drawings Complete permit requirements <u>Apr - June:</u> Receive and award bid package Complete the construction of the channel <u>July - Sept:</u> Conduct stream side egg takes NO UPDATE PROVIDED

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96139C1	Montague Riparian Rehabilitation Monitoring Program	USFS Hodges/USFS	On file; review complete	CE on file (12/4/92)	On file	Monitor structures at low flow Map stream channels at structures and areas downstream Assess use of fish habitat and vegetation NO UPDATE PROVIDED
96142-BAA	Status and Ecology of Kittlitz's Murrelet in Prince William Sound	NOAA ABR, Inc.	On file; review complete	CE on file	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan - Mar:</u> Arrange logistics <u>Apr - June:</u> Conduct early summer cruise <u>July - Sept:</u> Conduct late summer cruise Analyze stomach contents Keypunch data and QA/QC Digitize data, measure geographic data, QA/QC
96144	Common Murre Population Monitoring	DOI Roseneau/DOI	On file	CE on file		Authorization to spend not yet provided by Executive Director; pending submittal and review of revised DPD and budget.
96145	Cutthroat Trout and Dolly Varden: the Relation Among and Within Populations of Anadromous and Resident Forms	USFS Reeves/PacNW Research Lab	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> Develop cooperative agreement with OSU UNDERWAY: Secure appropriate collecting permits obtain samples of Dolly Varden and cutthroat trout for analysis Hire technician for genetic analysis Hire field technician <u>Jan - Mar:</u> Complete genetic screening Select field sites Secure contract vessel Assemble required field gear and ship to Cordova <u>Apr - Jan:</u> Contract with people (2) or field work Begin analysis <u>July - Sept:</u> Collect samples of Dolly Varden at field sites Initial analysis of genetic data on cutthroat trout

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96149	Archaeological Site Stewardship	ADNR Reger/ADNR	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> DONE: NEPA compliance UNDERWAY: Preliminary site and steward selection <u>Jan - June:</u> Training documentation provided to stewards, site selection finalized, sites visited and site documentation finalized <u>July - Sept:</u> Monitoring reports from stewards to coordinators due for compilation
96154	Comprehensive Community Plan for Restoration of Archaeological Resources in PWS and Lower Cook Inlet	USFS Chugach Heritage Foundation	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> UNDERWAY: Organize working group, assess facility needs, evaluate alternatives, assess training needs <u>Jan - Mar:</u> Assess field reports Community review conference Submit draft plan to Executive Director 3/14/96 <u>Apr - June:</u> Public meetings <u>July - Sept:</u> Submit revised plan to Executive Director 7/15/96 Present plan to Trustee Council 8/15/96 Submit final plan and project reports 9/30/96
96159	Surveys to Monitor Marine Bird Abundance In Prince William Sound During Winter and Summer 1996	DOI Agler/DOI	On file; review complete	CE on file	On file	<u>Oct-Dec:</u> Arrange logistics <u>Jan-Mar:</u> Hire and train personnel Conduct winter survey in PWS <u>Apr-June:</u> Enter data Arrange logistics for summersurvey <u>Jul-Sept:</u> Conduct summer survey in PWS Analyze data NO UPDATE PROVIDED

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96161	Differentiation and Interchange of Harlequin Duck Populations Within N. Pacific Region	DOI Goatcher/DOI	Revised DPD under peer review	CE on file		Authorization to spend not yet provided by Executive Director; pending review of revised DPD.
96162	Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in Prince William Sound, AK	ADFG UW/Kocan UCS/Marty SFU/Kennedy	On file; review complete	CE on file (95320S)	On file	<u>Oct - Dec:</u> DONE: Culture herring larvae and determine their SPF status Collect data on growth, survival, disease susceptibility Improve husbandry techniques Begin viral and fungal exposures <u>Jan - June:</u> Continue or begin infectivity studies with VHSV and <i>I. hoeri</i> Begin new year of SPF fish from eggs for future studies. Re-isolate organisms and verify that monoxenic infections were produced UNDERWAY: Begin blood chemistry on infected fish and physiological studies <u>July - Sept:</u> Collect 0-age herring for stress exposures technique development Analyze data Begin immune suppression studies on experimental DPD and budget not yet submitted for peer review and approval.
96163A	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species	NOAA Haldorson/NOAA	NEED	CE on file	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163B	Foraging of Seabirds	DOI Ostrand/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163C	Fish Diet Overlap Using Fish Stomach Content Analysis	NOAA Sturdevant/NOAA	NEED	CE on file	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163D	Distribution of Forage Fish as Indicated by Puffin Diet Sampling	DOI Piatt/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163E	Black-legged Kittiwakes as Indicators of Forage Fish Availability	DOI Irons/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.

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96163F	Factors Affecting Recovery of Pigeon Guillemot Populations	DOI Hayes/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163G	Diet Composition, Reproductive Energetics, and Productivity of Seabirds	NOAA Roby/UAF	NEED	CE on file	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163I	APEX Planning and Project Leader	DOI Duffy	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163J	Barren Islands Seabird Studies	DOI Roseneau/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163K	Using Predatory Fish to Sample Forage Fish	DOI Roseneau/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163L	Historical Review of Ecosystem Structure in the PWS/GOA Complex	DOI Piatt/DOI	NEED	NEED	On file (interim only)	DPD and budget not yet submitted for peer review and approval.
96163M	Lower Cook Inlet Study	DOI	NEED	NEED		DPD and budget not yet submitted for peer review and approval.
96163N	Black-legged Kittiwake Feeding Experiment	DOI DOI	NEED	NEED		DPD and budget not yet submitted for peer review and approval.
96163O	Statistical Review	DOI	NEED	NEED		DPD and budget not yet submitted for peer review and approval.
96163P	Sand Lance Hydrocarbon Exposure	NOAA	NEED	CE on file		DPD and budget not yet submitted for peer review and approval.
96165	Genetic Discrimination of Prince William Sound Herring Populations	ADFG J. Seeb/ADFG	On file; review complete	CE on file (95165)	On file	<u>Oct - Dec:</u> UNDERWAY: Complete laboratory analysis <u>Jan - Mar:</u> Evaluate lab results <u>Apr - June:</u> Collect samples Begin laboratory analysis <u>July - Sept:</u> Laboratory samples

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96166	Herring Natal Habitats	ADFG Willette & Carpenter/ADF G	On file; review complete	CE on file (95166)	On file	<u>Jan - Mar:</u> DONE: Biomass estimates <u>Apr - June:</u> Conduct acoustic survey Collect AWL, fecundity, disease, genetic stock ID, and bioenergetics samples Initiate dive surveys Assist reproductive impairment sample collection Lab processing of diver samples <u>July - Sept:</u> Finalize estimate of spawning
96170	Isotope Ratio Studies of Marine Mammals in Prince William Sound	ADFG Schell/UAF	On file; review complete	CE on file (9532012)	On file	<u>Oct - Mar:</u> UNDERWAY: Analyze isotope ratio samples collected in 1994 - 1995 UNDERWAY: Captive animal experiments <u>Apr - Sept:</u> Field work and sampling, captive animal experiments Analysis of samples
96180	Kenai Habitat Restoration & Recreation Enhancement Project	ADNR Fries/ADNR	On file; review complete	Not needed till sites selected	On file (just site select)	<u>Oct - Mar:</u> DONE: Review existing data on Kenai River Develop implementation strategy UNDERWAY: Develop site evaluation, ranking and prioritization system Conduct preconstruction site surveys Develop design plans Apply for permits Conduct public scoping meetings and prepare environmental compliance documents Organize volunteer support <u>Apr - June:</u> Secure construction permits Conduct construction work on first priority sites <u>July - Sept:</u> Monitor revegetation sites Monitor public use of completed project and proposed sites for next year

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96186	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound	ADFG Joyce/ADFG	On file; review complete	CE on file (95320B)	On file	<u>Oct - Dec:</u> Order supplies; create and test computer programs <u>Apr - June:</u> Hire personnel Apply tags to pink salmon fry at hatcheries <u>July - Sept:</u> Scan catches; recover tagged fish Decode tags Provide inseason catch composition estimates NO UPDATE PROVIDED
96188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in Prince William Sound	ADFG Joyce/ADFG	On file; review complete	CE on file (95320C)	On file	<u>Oct - Dec:</u> DONE: Apply thermal marks to embryos at four pink salmon hatcheries <u>Jan - Mar:</u> UNDERWAY: Collect samples from incubators <u>Apr - June:</u> Process and evaluate otoliths <u>July - Sept:</u> Analyze data
96190	Construction of a Linkage Map for the Pink Salmon Genome	ADFG Allendorf/UM	On file; review complete	CE on file	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan-Mar:</u> Initial screen of odd- and even-year fish for DNA polymorphisms <u>July-Sept:</u> Screen DNA polymorphisms to test for Mendelian inheritance and joint segregation Obtain gametes and create families for inheritance studies with even-year fish

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96191A	Oil-Related Embryo Mortalities in PWS Pink Salmon Populations	ADFG J. Seeb/ADFG	On file; review complete	CE on file (95191A)	On file	<u>Oct - Dec:</u> Embryo deposition sampling DONE: Initiate haploid androgenesis and novel mutation screen contracts Obtain gametes, spawn second generation Send milt to University of Washington on contract to produce androgenetic haploids Begin fertilized egg incubation Analysis of embryos at ADFG genetics laboratory <u>Jan - Mar:</u> Analyze data for brood year 1995 <u>July - Sept:</u> Prepare for brood year 1996 AFK incubation experiment Collect gametes and make crosses from 16 PWS streams; begin incubation of brood year 1996 gametes at AFK
96191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA Rice/NOAA	On file; review complete	CE on file (95191B)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Apr-June:</u> Final evaluation of progeny
96195	Pristane Monitoring in Mussels and Predators of Juvenile Pink Salmon & Herring	NOAA Short/NOAA	On file; review complete	CE on file	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan - Mar:</u> Prepare logistics for FY96 field season <u>July - Sept:</u> Collect mussel and predator tissue samples Analyze collected samples for pristane
96196	Genetic Structure of Prince William Sound Pink Salmon	ADFG J. & L. Seeb/ADFG	On file; review complete	CE on file (95320D)	On file	<u>Jan - Sept:</u> UNDERWAY: In-house allozyme analysis of archival samples collected prior to 1995 UNDERWAY: mtDNA analysis <u>July - Sept:</u> Field collections of 1996 samples

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96210	Prince William Sound Youth Area Watch	ADFG Chugach RRC	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> DONE: Students selected to participate DONE: Students receive training DONE: Students select onshore research and testing sites Students select offshore sites Students set up database <u>Ongoing:</u> Students check onshore testing sites twice weekly Students check offshore area testing sites twice monthly Students provide data to PWSSC weekly
96214	Documentary on Subsistence Harbor Seal Hunting in PWS	ADFG Tatitlek Village	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> DONE: Award contract <u>Jan - Mar:</u> Develop story line and story board for video <u>Apr - June:</u> Shoot necessary footage, conduct interviews <u>July - Sept:</u> Edit film Contractor will deliver 40 copies of videos
96220	Eastern PWS Wildstock Salmon Habitat Restoration	USFS/Schmid Eyak Native Village	On file; review complete	Project is EA prep. only	On file	<u>Oct - Mar:</u> Review of existing information UNDERWAY: Recruit fish habitat survey crew lead <u>Apr - June:</u> Identify study streams Recruit student interns Arrange logistics <u>July - Sept:</u> Conduct fisheries habitat surveys Analysis of field data

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96222	Chenega Bay Salmon Restoration -- Anderson Creek	USFS/Murphy Chenega IRA	On file; review complete	Project is EA prep only	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Apr - June:</u> Interview Chenega Bay residents about Anderson Creek <u>July - Sept:</u> Complete habitat surveys Complete project EA and preliminary fish pass design
96225	Port Graham Pink Salmon Subsistence Project	ADFG Port Graham	On file; review complete	CE on file	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Apr - June:</u> 250,000 pink salmon fry placed in net pens and reared to an average weight of 8 grams <u>July - Sept:</u> Monitor pink salmon escapement into Port Graham Capture hatchery broodstock Egg take
96244	Community-Based Harbor Seal Management and Biological Sampling	ADFG Reidel/ANHSC Fall/ADFG	On file; review complete	CE on file	On file	<u>Oct-Dec:</u> DONE: Develop contracts with the Alaska Native Harbor Seal Commission and the University of Alaska, hire technicians DONE: Hold regional training sessions for biological sampling DONE: Begin biological sample collection Hold first workshop (ANHSC) <u>Jan-Mar:</u> Distribute first proceedings report <u>Apr-June:</u> Hold second workshop (ANHSC) Demonstrate traditional knowledge database (ADFG) Produce/distribute second proceedings report (ANHSC) <u>Ongoing:</u> Conduct interviews with hunters to collect traditional knowledge (ADFG)

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96255	Kenai River Sockeye Salmon Restoration	ADFG L. Seeb & Tarbox/ADFG	On file; review complete	CE on file (95255)	On file (interim only)	Project not yet authorized by Executive Director to proceed; pending receipt of revised DPD and budget.
96256	Columbia and Solf Lakes Sockeye Salmon Stocking	USFS Murphy	On file; review complete	Project is EA prep only	On file	<u>Oct - Dec:</u> Review by Regional Planning Team <u>July - Sept:</u> Analyze stream flows and update baseline limnological data NO UPDATE PROVIDED
96258A	Sockeye Salmon Overescapement Project	ADFG Schmidt & Tarbox/ADFG	On file; review complete	CE on file (95258A)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER
96259	Restoration of Coghill Lake Sockeye Salmon	ADFG Kyle/ADFG	On file; review complete	EA/FONSI on file (94259)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER
96272	Chenega Chinook Release Program	ADFG PWSAC	On file; review complete	EA/FONSI on file (94272)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Apr - June:</u> Install netpen at Crab Bay Feed and imprint smolts <u>July - Sept:</u> Take chinook eggs for incubation
96290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	NOAA Short/NOAA	On file; review complete	CE on file (95290)	On file	NO ACTIVITIES SCHEDULED THIS QUARTER <u>Jan - Sept:</u> Solicit information from potential new user groups and begin development of interface for such groups
96320E	Salmon and Herring Predation	ADFG Willette		CE on file	On file	<u>Oct-Dec:</u> DONE: Field sampling DONE: Sample processing and data entry <u>Apr-June:</u> Field sampling in May Field sampling in June <u>July-Sept:</u> Field sampling in July

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96320G	Phytoplankton and Nutrients	ADFG McRoy/UAF		CE on file	On file	Planning for field season
96320H	Zooplankton in the PWS Ecosystem	ADFG Cooney/UAF		CE on file	On file	Planning for field season
96320I	Isotope Tracers - Food Webs of Fish	NOAA PWSSC	On file	CE on file	On file	CONTRACT NOT YET AWARDED
96320J	Information Systems and Model Development	NOAA PWSSC		CE on file	On file	CONTRACT NOT YET AWARDED
96320K	PWSAC: Experimental Fry Release	ADFG PWSAC		EA/FONSI on file (95320K)	On file	Eggs taken and incubating
96320M	Physical Oceanography in PWS	NOAA Salmon, PWSSC	On file	CE on file	On file	CONTRACT NOT YET AWARDED
96320N	Nekton/Plankton Acoustics	NOAA PWSSC	On file	CE on file	On file	CONTRACT NOT YET AWARDED
96320Q	Avian Predation on Herring Spawn	USFS Bishop/USFS		CE on file (95320Q)	On file	<u>Oct-Dec:</u> UNDERWAY: Data analysis <u>April 15:</u> Submit final report
96320R	SEA Trophodynamic Modeling and Validation Through Remote Sensing	ADFG Eslinger/UAF		CE on file	On file	Planning for field season
96320T	Juvenile Herring Growth and Habitat Partitioning	ADFG Norcross/ UAF		CE on file	On file	Developed conceptual herring recruitment model identifying research goals and objectives for next two years Began analysis of broadscale horizontal distribution data Compiling companion datasets for habitat analysis Preparing for March cruise

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96320U	Energetics of Herring and Pollock	ADFG Paul/UAF		CE on file	On file	<u>Oct-Dec:</u> UNDERWAY: Process bioenergetic samples collected fall 1995 <u>Apr-June:</u> Complete sample analysis of 1995 samples
96320Y	Variation in Local Predation Rates on Hatchery-Released Fry	ADFG PWSSC		CE on file	On file	NO UPDATE PROVIDED
96320Z1	Synthesis and Integration	ADFG Cooney/UAF		CE on file	On file	Developed model-based structures
96427	Harlequin Duck Recovery Monitoring	ADFG Rosenberg/AD FG	On file; review complete	CE on file	On file	<u>Oct-Dec:</u> DONE: Apply for USFS permits <u>Jan - Mar:</u> Initiate hiring process for seasonal technicians <u>Apr - June:</u> Hire technicians, arrange field logistics for field camps, boats, motors, survey equipment Begin surveys <u>July - Sept:</u> End Surveys <u>Oct - Dec:</u> Analyze field data and begin report preparation
96507	EVOS Symposium Publication	NOAA Wright/NOAA	On file; review complete	Report writing only	On file	<u>Oct - Dec:</u> DONE: Manuscripts to project editor <u>Jan - Mar:</u> Manuscripts to typesetter Proof to authors Corrected proof to typesetter <u>Apr - June:</u> Text to printer Proceedings published

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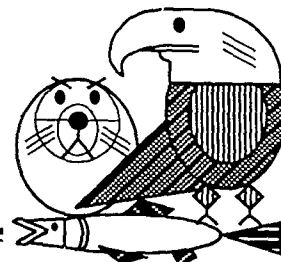
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Exxon Valdez Oil Spill Trustee Council

Restoration Office

645 G Street, Suite 401, Anchorage, Alaska 99501-3451

Phone: (907) 278-8012 Fax: (907) 276-7178



March 1996

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Dear Reader:

The Trustee Council adopted the *Exxon Valdez Oil Spill Restoration Plan* in November 1994 with the intent that the plan would be updated periodically to take into account new scientific information. Research and monitoring projects sponsored by the Trustee Council have documented improvements in the status of many injured resources and, in some cases, continuing injuries. We also have learned more about what can be done to restore injured resources and are developing management tools and carrying out restoration projects that will benefit those resources and the marine ecosystem in which they are found. Accordingly, it is time for the *Restoration Plan* to reflect these results and new information.

The enclosed documents describe proposed changes in two parts of the *Restoration Plan*: the List of Injured Resources and Services and Chapter 5: Goals, Objectives & Strategies. The Trustee Council invites public comment on these documents. To be most helpful, **please submit written comments on these drafts to: Exxon Valdez Oil Spill Trustee Council, 645 G Street, Suite 401, Anchorage, Alaska 99501 by June 1, 1996.** If you have questions about the proposed changes, or wish to request copies of the Chief Scientist's recommendations about additions to the list of injured resources and services (see below), please call 1-800-478-7745 (inside Alaska) or 1-800-283-7745 (outside Alaska).

List of Injured Resources and Services

Page 32 of the *Restoration Plan* indicates that the list of injured resources and services (in Table 2) will be reviewed as new information is obtained. The proposed revisions include changes to the recovery status of some resources (for example, moving Bald Eagles from the "recovering" category to "recovered") and additions to the list itself. In August 1995, the Trustee Council added Kittlitz's murrelets and common loons to the injured species list. In addition, we now propose to add three species of cormorants (red-faced, pelagic, and double-crested). Requests to add scoters (three species) and black-legged kittiwakes to the list were recommended against by the Trustee Council's Chief Scientist. If you would like copies of the Chief Scientist's recommendations, please call the Trustee Council Office (see telephone numbers above).

Chapter 5: Goals, Objectives & Strategies

Chapter 5 of the *Restoration Plan* (pp. 33-56) summarizes the status of each injured resource and service and describes restoration objectives for each resource and

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation

United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

service. The summaries of injury and recovery have been updated to reflect the changes in the revised list of injured resources and services. The recovery objectives have been updated as well, both to reflect new information about the status of resources and services and to better state what we believe are realistic, measurable objectives. Specific strategies for restoring injured resources are discussed and updated through the annual invitations to submit proposals (e.g., *Invitation to Submit Restoration Proposals for Federal Fiscal Year 1997*), but general strategies for restoring lost services are outlined below.

Your comments on these proposed changes are invited and encouraged. Thank you.

Thank you.

Sincerely,

Molly McCammon
Executive Director

enclosures (2)

DRAFT

Chapter 5

Goals, Objectives, and Strategies

This chapter discusses goals, objectives, and strategies for restoration. The first part of this chapter provides background information. The second part describes the status of injury and recovery and the recovery objective for injured resources and services listed in Table 2 in Chapter 4. Restoration strategies for each injured service are also discussed. Detailed information can be found on the following pages:

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BACKGROUND

Injury and Recovery

The information provided below summarizes the original basis for listing a resource or service as injured as well as updated information on the current status of the resource or service. This information should be read in conjunction with the revised version of Table 2 on page 32 (see enclosed).

The resources and services for which injuries are described below are not the only injuries resulting from the oil spill. For example, carcasses of about 90 species of birds were picked up following the oil spill. The resources and services described below, however, are those for which there was the most evidence of consequential injury. In the case of biological resources, these are ones for which there is evidence of population-level injuries or chronic sublethal injuries.

For more information about injuries to or the recovery status of individual resources or services, please consult the final reports of damage assessment or restoration projects pertaining to those resources or services. These are available through the Oil Spill Public Information Center.

Recovery Objectives

The recovery objectives described below are the measurable conditions that signal the recovery of individual resources or services. In general, resources and services will have recovered when they return to conditions that would have existed had the spill not occurred. In nature, however, populations often undergo large natural changes, and it is difficult to predict conditions that would have existed in the absence of the spill. Recovery, therefore, is most realistically indicated by a return to prespill conditions, which may be assessed by comparisons of pre- and post-spill populations, by comparisons of populations or communities in oiled and unoled areas, or, ideally, by both methods. For resources that were in decline before the spill, like harbor seals, recovery may be defined as the stabilization of a population, even if it is stabilized at a lower level than existed before the spill. In all cases, increased numbers of individuals, reproductive success sustained within normal bounds, improved growth and survival rates, and normal age and sex composition of the injured population, among others, are indicators that recovery is underway.

Full ecological recovery will have been achieved when the populations of flora and fauna are again present at former or prespill abundances, are healthy and productive, and there is a full complement of age classes at the level that would have been present had the spill not occurred. A recovered ecosystem provides the same functions and services as would have been provided had the spill not occurred.

Restoration Strategies

Restoration strategies are plans for achieving recovery objectives. Specific strategies to achieve recovery objectives for injured resources are described and updated in annual invitations (e.g., *Invitation to Submit Restoration Proposals for Federal Fiscal Year 1997*) and work plans. With

respect to restoration of lost services, the primary strategy is to restore the resources on which the services depend. Additional strategies, however, are described below.

The information in this chapter is expected to change as the restoration program adapts to new information. For example, population declines or sublethal effects may be documented for new resources; other resources may recover or show signs that recovery is underway. Thus, the following descriptions of the injury and recovery status and recovery objectives for injured resources and lost or reduced services will change in response to new information, conditions, and scientific insights.

New scientific data will be incorporated into restoration decisions without the need to change the *Restoration Plan*. However, changes will be reported in the Trustee Council's annual status report, and, periodically, Chapter 5 of the *Restoration Plan* itself will be updated.

RESOURCES

ARCHAEOLOGICAL RESOURCES

Injury and Recovery

The oil-spill area is believed to contain more than 3,000 sites of archaeological and historical significance. Twenty-four archaeological sites on public lands are known to have been adversely affected by cleanup activities, or looting and vandalism linked to the oil spill. Additional sites on both public and private lands were probably injured, but damage assessment studies were limited to public land and not designed to identify all such sites.

Documented injuries include theft of surface artifacts, masking of subtle clues used to identify and classify sites, violation of ancient burial sites, and destruction of evidence in layered sediments. In addition, vegetation has been disturbed, which has exposed sites to accelerated erosion. The effect of oil on soil chemistry and organic remains may reduce or eliminate the utility of radiocarbon dating in some sites.

Assessments of 14 sites in 1993 suggest that most of the archaeological vandalism that can be linked to the spill occurred early in 1989, before adequate constraints were put into place over the activities of oil spill clean-up personnel. Most vandalism took the form of "prospecting" for high yield sites. Once these problems were recognized, protective measures were implemented that successfully limited additional injury. In 1993, only two of the 14 sites visited showed signs of continued vandalism, but it is difficult to prove that this recent vandalism was related to the spill. Oil was visible in the intertidal zones of two of the 14 sites monitored in 1993, and hydrocarbon analysis has shown that the oil at one of the sites was from the *Exxon Valdez* spill. Hydrocarbon levels at the second sites were not sufficient to permit identification of the source or sources of the oil.

Monitoring of archaeological sites in 1994 and 1995 found no evidence of new damage from vandalism. The presence of oil is being determined in sediment samples taken from four sites in 1995.

None of the archaeological artifacts collected during the spill response, damage assessment, or restoration programs is stored within the spill area. These artifacts are stored in the University of Alaska Museum in Fairbanks and in the Federal Building in Juneau. Native communities in the spill area have expressed a strong interest in having them returned to the spill area for storage and display.

The Alutiiq Archaeological Repository in Kodiak, whose construction costs were partly funded by the Trustee Council, is the only physically appropriate artifact storage facility in the spill area. In 1995 the Trustee Council approved funds for development of a comprehensive community plan for restoring archaeological resources in Prince William Sound and lower Cook Inlet, including strategies for storing and displaying artifacts at appropriate facilities within the spill area.

Recovery Objective

Archaeological resources are nonrenewable: they cannot recover in the same sense as biological resources. Archaeological resources will be considered to have recovered when spill-related injury ends, looting and vandalism are at or below prespill levels, and the artifacts and scientific data which remain in vandalized sites are preserved (e.g., through excavation, site stabilization, or other forms of documentation).

BALD EAGLES

Injury and Recovery

The bald eagle is an abundant resident of coast lines throughout the oil-spill area. Following the spill a total of 151 eagle carcasses was recovered from the oil-spill area. Prince William Sound provides year-round and seasonal habitat for about 5,000 bald eagles, and within the Sound it is estimated that about 250 bald eagles died as a result of the spill. There were no + estimates of mortality outside the Sound, but there were deaths throughout the oil-spill area.

In addition to direct mortalities, productivity was reduced in oiled areas of Prince William Sound in 1989. Productivity was back to normal in 1990 and 1991, and an aerial survey of adults in 1995 indicated that the population has returned to or exceeded its prespill level in Prince William Sound.

Recovery Objective

Bald eagles will have recovered when their population and productivity have returned to prespill levels. Based on the results of studies in Prince William Sound, this objective has been met.

BLACK OYSTERCATCHERS

Injury and Recovery

Black oystercatchers spend their entire lives in or near intertidal habitats and are highly vulnerable to oil pollution. Currently, it is estimated that 1,500-2,000 oystercatchers breed in south-central Alaska. Only nine carcasses of adult oystercatchers were recovered following the spill, but it has been estimated that actual mortalities may have been as high as, but probably did not exceed, 20 percent in the spill area.

In addition to direct mortalities, breeding activities were disrupted by the oil and clean-up activities. In comparison with black oystercatchers on the largely unoiled Montague Island, oystercatchers at heavily oiled Green Island had reduced hatching success in 1989 and their chicks gained weight more slowly during 1991-93. Interpretation of these data on reproductive performance, however, are confounded by lack of prespill data. Productivity and survival of black oystercatchers in Prince William Sound have not been monitored since 1993, and the recovery status of this species is not known.

Recovery Objective

Black oystercatchers will have recovered when the population returns to prespill levels and reproduction is within normal bounds. An increasing population trend and comparable hatching success and growth rates of chicks in oiled and unoiled areas, after taking into account geographic differences, will indicate that recovery is underway.

CLAMS

Injury and Recovery

The magnitude of impacts on clam populations varies with the species of clam, degree of oiling, and location. However, data from the lower intertidal zone on sheltered beaches suggest that little-neck clams and, to a lesser extent, butter clams were killed and suffered slower growth rates as a result of the oil spill and clean-up activities. In communities on the Kenai Peninsula, Kodiak, and the Alaska Peninsula and in Prince William Sound, and Alaska Peninsula, concern about the effects of the oil spill on clams and subsistence uses of clams remains high.

Recovery Objective

Clams will have recovered when populations and productivity have returned to levels that would have prevailed in the absence of the oil spill, based on prespill data or comparisons of oiled and unoiled sites.

COMMON LOONS

Injury and Recovery

Carcasses of 395 loons of four species were recovered following the spill, including at least 216 common loons. Current population sizes are not known for any of these species, but, in general, loons are long-lived, slow-reproducing, and have small populations. Common loons in the oil-spill area may number only a few thousand, including only hundreds in Prince William Sound. Common loons injured by the spill probably included a mixture of resident and migrant birds, and their recovery status is not known.

Recovery Objective

No realistic recovery objective can be identified without more information on injury to and the recovery status of common loons.

COMMON MURRES

Injury and Recovery

About 30,000 carcasses of oiled birds were picked up following the oil spill, and 74 percent of them were common and thick-billed murres (mostly common murres). Many more murres probably died than actually were recovered. Based on surveys of index colonies at such locations as Resurrection Bay, the Chiswell, Barren, and Triplet islands, and Puale Bay, the spill-area population declined by about 40 percent. In addition to direct losses of murres, there is evidence that the timing of reproduction was disrupted and productivity reduced. Interpretation of the effects of the spill, however, is complicated by incomplete prespill data and by indications that populations at some colonies were in decline before the oil spill.

Postspill monitoring of productivity at the colonies in the Barren Islands indicates that reproductive timing and success were again within normal bounds by 1993. Numbers of adult murres were last surveyed at those same colonies in 1994. At that time, the local population had not returned to prespill levels.

The Alaska Predator Ecosystem Experiment (the APEX project), funded by the Trustee Council, is investigating the linkages among murre populations and changes in the abundance of forage fish, such as Pacific herring, sand lance, and capelin.

Recovery Objective

Common murres will have recovered when populations at index colonies have returned to prespill levels and when productivity is sustained within normal bounds. Increasing population trends at index colonies will be a further indication that recovery is underway.

CORMORANTS

Injury and Recovery

Cormorants are large fish-eating birds, that spend much of their time on the water or perched on rocks near the water. Three species typically are found within the oil-spill area.

Carcasses of 838 cormorants were recovered following the oil spill, including 418 pelagic, 161 red-faced, 38 double-crested, and 221 unidentified cormorants. Many more cormorants probably died as a result of the spill, but their carcasses were not found.

No regional population estimates are available for any of the cormorant species found in the oil-spill area. The U.S. Fish and Wildlife Service Alaska Seabird Colony Catalog, however, currently lists counts of 7,161 pelagic cormorants, 8,967 red-faced cormorants, and 1,558 double-crested cormorants in the oil-spill area. These are direct counts, not overall population estimates, but they suggest that population sizes are small. In this context, it appears that injury to all three cormorant species may have been significant.

In addition, there were statistically-significant declines in the estimated numbers of cormorants (all three species combined) in Prince William Sound based on pre- and postspill July boat surveys (1972-73 v 1989-91). There were fewer cormorants in oiled than in unoiled parts of the Sound. More recent surveys (1993-94) did not show an increasing population trend since the oil spill. With support from the Trustee Council, these boat surveys will be repeated in 1996.

Recovery Objective

Pelagic, red-faced, and double-crested cormorants will have recovered when their populations return to prespill levels in the oil-spill area. An increasing population trend in Prince William Sound will indicate that recovery is underway.

CUTTHROAT TROUT

Injury and Recovery

Prince William Sound is at the northwestern limit of the range of cutthroat trout, and few stocks are known to exist within the Sound. Local cutthroat trout populations rarely number more than 1,000 each, and the fish have small home ranges and are geographically isolated. Cutthroat trout, therefore, are highly vulnerable to exploitation, habitat alteration, or pollution.

Following the oil spill, cutthroat trout in a small number of oiled index streams grew more slowly than in unoiled streams, possibly as a result of reduced food supplies or exposure to oil, and there is concern that reduced growth rates may have led to reduced survival. The difference in growth rates persisted through 1991. No studies have been conducted since then, and the recovery status of this species is not known.

Recovery Objective

Cutthroat trout will have recovered when growth rates within oiled areas are similar to those for unoiled areas, after taking into account geographic differences.

DESIGNATED WILDERNESS AREAS**Injury and Recovery**

The oil spill delivered oil in varying quantities to the waters adjoining the seven areas within the spill area designated as wilderness areas and wilderness study areas by Congress. Oil also was deposited above the mean high-tide line in these areas. During the intense clean-up seasons of 1989 and 1990, thousands of workers and hundreds of pieces of equipment were at work in the spill area. This activity was an unprecedented imposition of people, noise, and activity on the area's undeveloped and normally sparsely occupied landscape. Although activity levels on these wilderness shores have probably returned to normal, at some locations there is still residual oil.

Recovery Objective

Designated wilderness areas will have recovered when oil is no longer encountered in these areas and the public perceives them to be recovered from the spill.

DOLLY VARDEN**Injury and Recovery**

Like the cutthroat trout, there is evidence that Dolly Varden grew more slowly in oiled streams than in unoiled streams, and there is concern that reduced growth rates may have led to reduced survival. However, no data have been gathered since 1991. The recovery status of this species is not known.

Recovery Objective

Dolly Varden will have recovered when growth rates within oiled streams are comparable to those in unoiled streams, after taking into account geographic differences.

HARBOR SEALS**Injury and Recovery**

Harbor seal numbers were declining in the Gulf of Alaska, including in Prince William Sound, before the oil spill. *Exxon Valdez* oil affected harbor seal habitats, including key haul-out areas and adjacent waters, in Prince William Sound and as far away as Tugidak Island, near Kodiak. Estimated mortality as a direct result of the oil spill was about 300 seals in oiled parts of Prince William Sound. Based on surveys conducted before (1988) and after (1989) the oil spill, seals in oiled areas had declined by 43 percent, compared to 11 percent in unoiled areas.

When a population declines it means that deaths exceed births, and harbor seals in both oiled and unoiled parts of Prince William Sound have continued to decline since the spill. For the period 1989-1994, the average estimated annual rate of decline is about 6 percent. Changes in the amount or quality of food may have been an initial cause of this long-term decline. Although there is no evidence that such factors as predation by killer whales, subsistence hunting, and interactions with commercial fisheries caused the decline in the harbor seal population, these are among the on-going sources of mortality.

Harbor seals have long been a key subsistence resource in the oil-spill area. Subsistence hunting is affected by the declining seal population, and lack of opportunities to hunt seals has changed the diets of subsistence users who traditionally had relied heavily on these marine mammals.

Recovery Objective

Harbor seals will have recovered from the effects of the oil spill when their population is stable or increasing.

HARLEQUIN DUCKS

Injury and Recovery

Harlequin ducks feed in intertidal and shallow subtidal habitats where most of the spilled oil was initially stranded. More than 200 harlequin ducks were found dead in 1989, mostly in Prince William Sound. Many more than that number probably died throughout the spill area. Since the oil spill occurred in early spring, before wintering harlequins had left the oil-spill area, the impacts of the oil spill may have extended beyond the spill area. The geographic extent of these impacts is not known.

Bile samples from harlequin ducks (combined with samples from Barrow's and common goldeneye) collected in eastern and western Prince William Sound and in the western Kodiak Archipelago in 1989-90 had higher concentrations of hydrocarbon metabolites than a small number of samples from harlequins and goldeneye collected at Juneau. Prespill data on harlequin populations and productivity are poor and complicated by possible geographic differences in habitat quality. However, the summer population in Prince William Sound is small, only a few thousand birds. There continues to be concern about poor reproduction and a possible decline in numbers of molting birds in western versus eastern parts of the Sound.

Recovery Objective

Harlequin ducks will have recovered when breeding and postbreeding season densities and production of young return to prespill levels. A normal population age- and sex-structure and reproductive success, taking into account geographic differences, will indicate that recovery is underway.

INTERTIDAL COMMUNITIES

Injury and Recovery

Portions of 1,500 miles of coastline were oiled by the spill in Prince William Sound, on the Kenai and Alaska peninsulas, and in the Kodiak Archipelago. Both the oil and intensive clean-up activities had significant impacts on the flora and fauna of the intertidal zone, the area of beach between low and high tides. Intertidal resources are important to subsistence users, sea and river otters, and to a variety of birds, including black oystercatchers, harlequin ducks, surf scoters, and pigeon guillemots.

Impacts to intertidal organisms occurred at all tidal levels in all types of habitats throughout the oil-spill area. Many species of algae and invertebrates were less abundant at oiled sites compared to unoiled reference sites. Other opportunistic species, including a small species of barnacle, oligochaete worms, and filamentous brown algae, colonized shores where dominant species were removed by the oil spill and clean-up activities. The abundance and reproductive potential of the common seaweed, *Fucus gardneri* (known as rockweed or popweed), was also reduced following the spill.

On the sheltered, bedrock shores that are common in Prince William Sound, full recovery of *Fucus* is crucial for the recovery of intertidal communities at these sites, since many invertebrate organisms depend on the cover provided by this seaweed. *Fucus* has not yet fully recovered in the upper intertidal zone on shores subjected to direct sunlight, but in many locations, recovery of intertidal communities has made substantial progress. In other habitat types, such as estuaries and cobble beaches, many species did not show signs of recovery when they were last surveyed in 1991.

Recovery Objective

Intertidal communities will have recovered when community composition on oiled shorelines is similar to that which would have prevailed in the absence of the spill. Indications of recovery are the reestablishment of important species, such as *Fucus* at sheltered rock sites, the convergence in community composition on oiled and unoiled shorelines, and the provision of adequate, uncontaminated food supplies for top predators in intertidal and nearshore habitats.

KILLER WHALES

Injury and Recovery

More than 80 killer whales in six "resident" pods regularly use Prince William Sound within their ranges. Other whales in "transient" groups are observed in the Sound less frequently. There has been particular concern in Prince William Sound about the resident AB pod, which numbered 36 animals prior to the spill. Fourteen whales disappeared from this pod in 1989 and 1990, during which time no young were recruited into the population. Although four calves were added to the AB pod during 1992-94, surveys in 1994 and 1995 indicate the loss of five more adult whales. The link between the losses and the oil spill is only circumstantial, but the

probable mortality of killer whales in the AB pod in Prince William Sound following the spill far exceeds rates observed for other pods in British Columbia and Puget Sound over the last 20 years.

The AB pod may never regain its former size, but overall numbers within the major resident killer whales pods in Prince William Sound are at or exceed prespill levels. There is concern, however, that a decline in resightings of individuals within the AT group of transient killer whales has accelerated following the oil spill.

Recovery Objective

Killer whales in the AB pod will have recovered when the number of individuals in the pod is stable or increasing relative to the trends of other major resident pods in Prince William Sound.

KITTLITZ'S MURRELET

Injury and Recovery

The Kittlitz's murrelet is found only in Alaska and portions of the Russian Far East, and a large fraction of the world population, which may number only a few tens of thousands, breeds in Prince William Sound. The Kenai Peninsula coast and Kachemak Bay are also important concentration areas for this species. Very little is known about Kittlitz's murrelets. However, they associate closely with tidewater glaciers and nest on scree slopes and similar sites on the ground.

Seventy-two Kittlitz's murrelets were positively identified among the bird carcasses recovered after the oil spill. Nearly 450 more *Brachyramphus* murrelets were not identified to the species level, and it is reasonable to assume that some of these were Kittlitz's. In addition, many more murrelets probably were killed by the oil than were actually recovered. One published estimate places direct mortality of Kittlitz's murrelets from the oil spill at 1,000-2,000 individuals, which would represent a substantial fraction of the world population.

Because of the highly patchy distribution of Kittlitz's murrelet, the difficulty of identifying them in the field, and the fact that so little is known about this species, the recovery status of the Kittlitz's murrelet is not known. The Trustee Council has funded an exploratory study on the ecology and distribution of this murrelet starting in 1996.

Recovery Objective

No recovery objective can be identified for Kittlitz's murrelet at this time.

MARBLED MURRELET

Injury and Recovery

The northern Gulf of Alaska, including Prince William Sound, is a key area of concentration in the distribution of marbled murrelets. The marbled murrelet is federally listed as a threatened species in Washington, Oregon, and California; it is also listed as threatened in British Columbia.

The marbled murrelet population in Prince William Sound had declined before the oil spill. The causes of the prespill decline are unknown, but may be related to changing food supplies. It is not known whether the murrelet population was still declining at the time of the oil spill, but the spill caused additional losses of murrelets. Carcasses of nearly 1,100 *Brachyramphus* murrelets were found after the spill, and about 90 percent of the murrelets that could be identified to the species level were marbled murrelets. Many more murrelets probably were killed by the oil than were found, and it is estimated that as much as 7 percent of the marbled murrelet population in the oil-spill area was killed by the spill.

Population estimates for murrelets are highly variable. Postspill boat surveys do not yet indicate any statistically significant increase in numbers of marbled murrelets in Prince William Sound, nor is there evidence of any further decline.

Recovery Objective

Marbled murrelets will have recovered when its population is stable or increasing. Stable or increasing productivity will be an indication that recovery is underway.

MUSSELS

Injury and Recovery

Mussels are an important prey species in the nearshore ecosystem throughout the oil-spill area, and beds of mussels provide physical stability and habitat for other organisms in the intertidal zone. For these reasons, mussel beds were purposely left alone during *Exxon Valdez* clean-up operations.

In 1991, high concentrations of relatively unweathered oil were found in the mussels and underlying byssal mats and sediments in certain dense mussel beds. The biological significance of oiled mussel beds is not known, but they are potential pathways of oil contamination for local populations of harlequin ducks, black oystercatchers, river otters, and juvenile sea otters, all of which feed to some extent on mussels and show some signs of continuing injury.

About 30 mussel beds in Prince William Sound are known still to have oil residue, and 12 of them were cleaned on an experimental basis in 1994. By August 1995, these beds showed a 98 percent reduction in oil in the replacement sediments, compared to what had been there before. Mussel beds along the outer Kenai Peninsula coast, the Alaska Peninsula, and Kodiak

Archipelago were surveyed for the presence of oil in 1992, 1993, and 1995. Hydrocarbon concentrations in mussels and sediments at these Gulf of Alaska sites is generally lower than for sites in the Sound, but at some sites substantial concentrations persist.

Subsistence users continue to be concerned about contamination from oiled mussel beds. The Nearshore Vertebrate Predator project is focusing on mussels as a key prey species and component of the nearshore ecosystem.

Recovery Objective

Mussels will have recovered when concentrations of oil in the mussels and in the sediments below mussel beds reach background levels, do not contaminate their predators, and do not affect subsistence uses.

PACIFIC HERRING

Injury and Recovery

Pacific herring spawned in intertidal and subtidal habitats in Prince William Sound shortly after the oil spill. A significant portion of these spawning habitats as well as herring staging areas in the Sound were contaminated by oil. Field studies conducted in 1989 and 1990 documented increased rates of egg mortality and larval deformities in oiled versus unoled areas. Subsequent laboratory studies confirm that these effects can be caused by exposure to *Exxon Valdez* oil, but the significance of these injuries at a population level is not known.

The 1988 prespill year-class of Pacific herring was very strong in Prince William Sound, and, as a result, the estimated peak biomass of spawning adults in 1992 was at a record level. In 1993, however, there was an unprecedented crash of the adult herring population. A viral disease and fungus were the probable agents of mortality, and the connection between the oil spill and the disease outbreak is under investigation. Numbers of spawning herring in Prince William Sound have remained depressed through the 1995 season. Preliminary results from the Sound Ecosystem Assessment (SEA) Project indicate the possible significance of walleye pollock as both competitors with and predators of herring, which may indicate that there is a connection between the lack of recruitment of strong year classes of herring and the presence of large numbers of pollock in Prince William Sound.

Pacific herring are extremely important ecologically and commercially and for subsistence users. Reduced herring populations could have significant implications for both their predators and their prey, and the closure of the herring fishery from 1993 through 1995 has had serious economic impact on people and communities in Prince William Sound.

Recovery Objective

Pacific herring will have recovered when the next highly successful year class is recruited into the fishery and when other indicators of population health are sustained within normal bounds in Prince William Sound.

PIGEON GUILLEMOT

Injury and Recovery

Although the pigeon guillemot is widely distributed in the north Pacific region, nowhere does it occur in large numbers or concentrations. Because guillemots feed in shallow, nearshore waters, the guillemots and the fish on which they prey are vulnerable to oil pollution.

Like the marbled murrelet, there is evidence that the pigeon guillemot population in Prince William Sound had declined before the spill. The causes of the prespill decline are unknown. It is estimated that 10-15 percent of the spill-area population may have died following the spill. Guillemot nesting on the Naked Islands were well-studied in 1978-81. Postspill surveys using the same methods indicated a decline of about 40 percent in guillemots in the Naked Islands. Based on boat surveys, the overall guillemot population in the Sound declined as well.

Numbers of guillemots recorded on boat surveys are highly variable, and there is not yet any statistically significant evidence of a postspill population increase. The factors responsible for the guillemot's prespill decline may negate or mask recovery from the effects of the oil spill.

The Alaska Predator Ecosystem Experiment (the APEX project), supported by the Trustee Council, is investigating the possible link between pigeon guillemot declines to the availability and abundance of forage fish, such as Pacific herring, sand lance, and capelin.

Recovery Objective

Pigeon guillemots will have recovered when their population is stable or increasing. Sustained productivity within normal bounds will be an indication that recovery is underway.

PINK SALMON

Injury and Recovery

About 75 percent of wild pink salmon in Prince William Sound spawn in the intertidal portions of streams and were highly vulnerable to the effects of the oil spill. Hatchery salmon and wild salmon from both intertidal and upstream spawning habitats swam through oiled waters and ingested oil particles and oiled prey as they foraged in the Sound and emigrated to sea. As a result, three types of early life-stage injuries were identified: First, growth rates in juvenile pink salmon from oiled parts of Prince William Sound were reduced. Second, there was increased egg mortality in oiled versus unoled streams. A possible third effect, genetic damage, is under investigation.

In the years preceding the spill, returns of wild pink salmon in Prince William Sound varied from a maximum of 21.0 million fish in 1984 to a minimum of 1.8 million in 1988. Since the spill, returns of wild pinks have varied from a high of about 14.4 million fish in 1990 to a low of about 2.2 million in 1992. There is a particular concern about the Sound's southwest management district, where returns of both hatchery and wild stocks have been generally weak since the oil spill. Because of the tremendous natural variation in adult returns, however, it is difficult to attribute poor returns in a given year to injuries caused by *Exxon Valdez* oil. For pink salmon, mortalities of eggs and juveniles remain the best indicators of injury and recovery.

Evidence of reduced juvenile growth rates was limited to the 1989 season, but increased egg mortality persisted in oiled compared to unoled streams through 1993. The 1994 and 1995 seasons were the first since 1989 in which there were no statistically significant differences in egg mortalities in oiled and unoled streams. These data indicate that recovery from oil-spill effects is underway.

The Sound Ecosystem Assessment (SEA) Project is exploring oceanographic and ecological factors that influence production of pink salmon and Pacific herring. These natural factors are likely to have the greatest influence over year-to-year returns in both wild and hatchery stocks of pink salmon.

Recovery Objective

Pink salmon will have recovered when population indicators, such as growth and survival, are within normal bounds and there are no statistically significant differences in egg mortalities in oiled and unoled streams for two years each of odd- and even-year runs in Prince William Sound.

RIVER OTTERS

Injury and Recovery

River otters have a low population density and an unknown population size in Prince William Sound, and, therefore, it is hard to assess oil-spill effects. Twelve river otter carcasses were found following the spill, but the actual mortality is not known. Studies conducted during 1989-91 identified several differences between river otters in oiled and unoled areas in Prince William Sound, including biochemical evidence of exposure to hydrocarbons or other sources of stress, reduced diversity in prey species, reduced body size (length-weight), and increased territory size. Since there were no prespill data and sample sizes were small, it is not clear that these differences are the result of the oil spill.

The Nearshore Vertebrate Predator project, now underway, will shed new light on the status of the river otter. In 1995 the Alaska Board of Game used its emergency authority to restrict trapping of river otters in western Prince William Sound to ensure that the results of this study are not compromised by the removal of animals from study areas on Jackpot and Knight islands.

Recovery Objective

The river otter will have recovered when biochemical indices of hydrocarbon exposure or other stresses and indices of habitat use are similar between oiled and unoiled areas of Prince William Sound, after taking into account any geographic differences.

ROCKFISH

Injury and Recovery

Very little is known about rockfish populations in the northern Gulf of Alaska. A small number of dead adult rockfish was recovered following the oil spill, and autopsies of five specimens indicated that oil ingestion was the cause of death. Analysis of other rockfish showed exposure to hydrocarbons and sublethal effects. In addition, closures to salmon fisheries apparently increased fishing pressures on rockfish, which may have adversely affected the rockfish population. However, the original extent of injury and the current recovery status of this species are unknown.

Recovery Objective

No recovery objective can be defined.

SEA OTTERS

Injury and Recovery

By the late 1800s, sea otters had been eliminated from most of their historical range in Alaska due to excessive fur harvesting by Russian and American fleets. Surveys of sea otters in the 1970s and 1980s, however, indicated a healthy and expanding population, including in Prince William Sound, prior to the oil spill. Sea otters are today an important subsistence resource for their furs.

About 1,000 sea otter carcasses were recovered following the spill, although additional animals probably died but were not recovered. In 1990 and 1991, higher-than-expected proportions of prime-age adult sea otters were found dead in western Prince William Sound, and there was evidence of higher mortality of recently weaned juveniles in oiled areas. By 1992-93, overwintering mortality rates for juveniles had decreased, but were still higher in oiled than in unoiled parts of the Sound.

Based on boat surveys conducted in Prince William Sound, there is not yet statistically significant evidence of an overall population increase following the oil spill (1990-94). This lack of a significant positive trend, however, may result from a lack of statistical power in the survey, which will be repeated in 1996.

Based on observations by local residents, it is evident that the sea otter is abundant in much of Prince William Sound. There is no evidence that recovery has occurred, however, in heavily oiled

parts of western Prince William Sound, such as around northern Knight Island. The Nearshore Vertebrate Predator project, which was started in 1995, should help clarify the recovery status of the sea otter in the western Sound.

Recovery Objective

Sea otters will have recovered when the population in oiled areas returns to its prespill abundance and distribution. An increasing population trend and normal reproduction and age structure in western Prince William Sound will indicate that recovery is underway.

SEDIMENTS

Injury and Recovery

Exxon Valdez oil penetrated deeply into cobble and boulder beaches that are common on shorelines throughout the spill area, especially in sheltered habitats. Cleaning and natural degradation removed much of the oil from the intertidal zone, but visually identifiable surface and subsurface oil persists at many locations.

The last comprehensive survey of shorelines in Prince William Sound, conducted in 1993, included 45 areas of shoreline known to have had the most significant oiling. That survey indicated that heavy subsurface oil had decreased by 65 percent since 1991, and that surface oil had decreased by 50 percent over the same time period. Surveys also have indicated that remaining shoreline oil in the Sound is relatively stable and, by this time, is likely to decrease only slowly. Oil also persists under armored rock settings on the Kenai and Alaska peninsulas.

In 1995, a shoreline survey team visited 30 sites in the Kodiak Archipelago that had measurable or reported oiling in 1990 and 1991. The survey team found no oil or only trace amounts at these sites. The oiling in the Kodiak area is not persisting as it is at sites in Prince William Sound due to the higher energy settings in the Kodiak area, the state of the oil when it came ashore, and the smaller concentrations of initial oiling relative to the Sound.

Following the oil spill, chemical analyses of oil in subtidal sediments were conducted at a small number of index sites in Prince William Sound. At these sites, oil in subtidal sediments reached its greatest concentrations at water depths of 20 meters below mean low tide, although elevated levels of hydrocarbon-degrading bacteria (associated with elevated hydrocarbons) were detected at depths of 40 and 100 meters in 1990 in Prince William Sound. By 1993, however, there was little evidence of *Exxon Valdez* oil and related microbial activity at most index sites in Prince William Sound, except at those associated with sheltered beaches that were heavily oiled in 1989. These index sites--at Herring, Northwest, and Sleepy bays--are among the few sites at which subtidal oiling is still known to occur.

Recovery Objective

Sediments will have recovered when there are no longer residues of *Exxon Valdez* oil on shorelines (both tidal and subtidal) in the oil-spill area. Declining oil residues and diminishing toxicity are indications that recovery is underway.

SOCKEYE SALMON

Injury and Recovery

Commercial salmon fishing was closed in Prince William Sound and in portions of Cook Inlet and near Kodiak in 1989 to avoid any possibility of contaminated salmon being sent to market. As a result, there were higher-than-desirable numbers (i.e., overescapement) of spawning sockeye salmon entering the Kenai River, Red and Akalura lakes on Kodiak Island, and other lakes on Afognak Island and the Alaska Peninsula. Initially these high escapements may have produced an overabundance of juvenile sockeye that overgrazed the zooplankton, thus altering planktonic food webs in the nursery lakes. Although the exact mechanism is unclear, the result was lost sockeye production as shown by declines in the returns of adults per spawning sockeye.

The effects of the 1989 overescapement of sockeye salmon have persisted in the Kenai River system through 1995. Although the overall escapement goal for that system was met in 1995, there is concern that the initial overescapement will continue to affect post-spill year-classes.

Production of zooplankton in both Red and Akalura lakes on Kodiak Island has rebounded from the effects of the overescapement at the time of the oil spill. There continues to be some problem in the rate of production of sockeye fry in Red and Akalura lakes. This problem may or may not be linked to the overescapement, and possible additional factors include low egg-to-fry survival, competition from other freshwater fishes, and the interception of adults in the mixed-stock fishery harvest offshore.

Recovery Objective

Sockeye salmon in the Kenai River system and Red and Akalura lakes will have recovered when adult returns-per-spawner are within normal bounds.

SUBTIDAL COMMUNITIES

Injury and Recovery

Oil that was transported down to subtidal habitats apparently caused changes in the abundance and species composition of plant and animal populations below lower tides. Different habitats, including eelgrass beds, kelp beds, and adjacent nearshore waters (depths less than 20 meters), were compared at oiled and unoled sites. The concentration of oil in sediments in 1990 was more than twice as great at oiled sites. The greatest differences were detected at oiled sites with sandy sea bottoms in the vicinity of eelgrass beds, at which there were reduced diversity and abundance of eelgrass shoots and flowers, worms, clams, snails, oil-sensitive amphipods

(sand fleas), and helmet crabs. Organisms living in sediment at depths of 3-20 meters were especially affected. Some opportunistic (i.e., stress-tolerant) invertebrates within the substrate, mussels and worms on the eelgrass, and juvenile cod, increased in numbers at oiled sites.

By 1993, oil concentrations in sediments had dropped considerably, so that there was little difference between oiled and unoled sites. The eelgrass habitat, the only habitat examined in 1993, revealed fewer differences in abundances of plants and animals. However, as was true in 1990, some opportunistic species still were more abundant at oiled sites. These included the opportunistic worms and snails, mussels and worms on the eelgrass, and juvenile cod.

Preliminary results from eelgrass habitats visited in 1995 revealed that natural recovery had occurred. No difference was detected in abundance of eelgrass shoots and flowers, mussels on eelgrass, amphipods, helmet crabs, and dominant sea stars between oiled and unoled sites. The abundance of small green sea urchins, however, was more than 10 times greater at oiled sites. The possibility that urchins increased due to a reduction in numbers of sea otters, which prey on urchins, is being examined in the Nearshore Vertebrate Predator Project. Analyses of the recent oil concentrations in sediments and organisms that live within the substrate are not yet complete.

Recovery Objective

Subtidal communities will have recovered when community composition in oiled areas, especially in association with eelgrass beds, is similar to that in unoled areas. Indications of recovery are the return of oil-sensitive species, such as amphipods, and the reduction of opportunistic species at oiled sites.

SERVICES

COMMERCIAL FISHING

Injury and Recovery

Commercial fishing is a service that was reduced through injury to commercial fish species (see individual resources) and also through fishing closures. In 1989, closures affected fisheries in Prince William Sound, lower Cook Inlet, upper Cook Inlet, Kodiak, and Chignik. These fisheries opened again in 1990. Since then, there have been no spill-related district-wide closures, except for the Prince William Sound herring fishery, which was closed in 1993 and has remained closed since then due to the collapse of the herring population and poor fishery recruitment since 1989. These closures, including the on-going closure of the herring fishery in Prince William Sound, harmed the livelihoods of persons who fish for a living and the communities in which they live. To the extent that the oil spill continues to be a factor that reduces opportunities to catch fish, there is on-going injury to commercial fishing as a service.

On this basis, the Trustee Council continues to make major investments in projects to understand and restore commercially important fish species that were injured by the oil spill.

These projects include: supplementation work, such as fertilizing Coghill Lake to enhance its sockeye salmon run and construction of a barrier bypass at Little Waterfall Creek; development of tools that have almost immediate benefit for fisheries management, such as otolith mass marking of pink salmon in Prince William Sound and in-season genetic stock identification for sockeye salmon in Cook Inlet; and research such as the SEA Project and genetic mapping which will enhance the ability to predict and manage fisheries over the long-term.

Recovery Objective

Commercial fishing will have recovered when the commercially important fish species have recovered and opportunities to catch these species are not lost or reduced because of the effects of the oil spill.

Restoration Strategy

The primary method for restoring commercial fishing is to restore the species that are fished commercially, such as pink salmon, Pacific herring, and sockeye salmon. These species are discussed elsewhere in this chapter. Three additional parts of the strategy for restoring commercial fishing are the following:

Promote recovery of commercial fishing as soon as possible. Many communities that rely on commercial fishing will be significantly harmed while waiting for commercial fish resources to recover through natural recovery alone. Therefore, an objective of restoration is to accelerate recovery of commercial fishing. This objective may be accomplished through increasing availability, reliability, or quality of commercial fish resources, depending on the nature of the injury. For resources that have sharply declined since the spill, such as pink salmon, and Pacific herring in Prince William Sound, this objective may take the form of increasing availability in the long run through improved fisheries management. Another example is providing replacement fish for harvest.

Protect commercial fish resources from further degradation. Further stress on commercial fish resources could impede recovery. Appropriate protection can take the form of habitat protection and acquisition if a resource faces loss of habitat. The Trustee Council can also contribute to the protection of commercial fish species by providing information needed to improve their management.

Monitor recovery. Monitoring the recovery of commercial fishing will track the progress of recovery, detect major reversals, and identify problems with the resources and resource management that may affect the rate or degree of recovery. Inadequate information may require managers to unduly restrict use of the injured resources, compounding the injury to commercial fishing.

PASSIVE USE

Injury and Recovery

Passive use of resources includes the appreciation of the aesthetic and intrinsic values of undisturbed areas, the value derived from simply knowing that a resource exists, and other nonuse values. Injuries to passive uses are tied to public perceptions of injured resources. Contingent valuation studies conducted by the State of Alaska for the *Exxon Valdez* oil spill litigation measured substantial losses of passive use values resulting from the oil spill.

Recovery Objective

Passive uses will have recovered when people perceive that aesthetic and intrinsic values associated with the spill area are no longer diminished by the oil spill.

Restoration Strategy

Any restoration strategy that aids recovery of injured resources, or prevents further injuries, will assist recovery of passive use values. No strategies have been identified that benefit only passive uses, without also addressing injured resources. Since recovery of passive uses requires that people know when recovery has occurred, the availability to the public of the latest information on the health and recovery status of injured resources, based on monitoring and research projects, will play an important role in the restoration of passive uses.

RECREATION AND TOURISM

Injury and Recovery

The spill disrupted use of the spill area for recreation and tourism. Resources important for wildlife viewing and which are still injured by the spill include killer whale, sea otter, harbor seal, and various seabirds. Residual oil exists on some beaches with high value for recreation, and its presence may decrease the quality of recreational experiences and discourage recreational use of these beaches.

Closures of sport hunting and fishing also affected use of the spill area for recreation and tourism. Sport fishing resources include salmon, rockfish, Dolly Varden, and cutthroat trout. Since 1992, the Alaska Board of Fisheries has imposed special restrictions on sport fishing in parts of Prince William Sound to protect cutthroat trout populations. Harlequin ducks are hunted in the spill area. The Alaska Board of Game restricted sport harvest of harlequin ducks in Prince William Sound in 1991, and those restrictions remain in place.

Recreation was also affected by changes in human use in response to the spill. For example, displacement of use from oiled areas to unoiled areas increased management problems and facility use in unoiled areas. Some facilities, such as the Green Island cabin and the Fleming Spit camp area, were injured by clean-up workers.

In the years since the oil spill, there has been a general, marked increase in visitation to the spill

area. There are still locations within the oil-spill area, however, avoided by recreational users because of the presence of residual oil.

Recovery Objective

Recreation and tourism will have recovered, in large part, when the fish and wildlife resources on which they depend have recovered, recreation use of oiled beaches is no longer impaired, and facilities and management capabilities can accommodate changes in human use.

Restoration Strategy

Preserve or improve the recreational and tourism values of the spill area. Habitat protection and acquisition are important means of preserving and enhancing the opportunities offered by the spill area. Facilities damaged during cleanup may be repaired if they are still needed. New facilities may restore or enhance opportunities for recreational use of natural resources. Improved or intensified public recreation management may be warranted in some circumstances. Projects that restore or enhance recreation and tourism would be considered only if they are consistent with the character and public uses of the area. However, all projects to preserve and improve recreation and tourism values must be related to an injured natural resource. See Policy 9 in Chapter 2.

Remove or reduce residual oil if treatment is cost effective and less harmful than leaving the oil in place. Removal of residual oil from beaches with high value for recreation and tourism may restore these services for some users. However, this benefit would have to be balanced against cost and the potential for further disruption to intertidal communities.

Monitor recovery. Monitor the recovery of resources used for recreation and tourism. Also monitor changes in recreation and tourism in the spill area.

SUBSISTENCE

Injury and Recovery

Fifteen predominantly Alaskan Native communities (numbering about 2,200 people) in the oil-spill area rely heavily on harvests of subsistence resources, such as fish, shellfish, seals, deer, ducks, and geese. Many families in other communities, both in and beyond the oil-spill area, also rely on the subsistence resources of the spill area.

Subsistence harvests of fish and wildlife in most of these villages declined substantially following the oil spill. The reasons for the declines include reduced availability of fish and wildlife to harvest, concern about possible health effects of eating contaminated or injured fish and wildlife, and disruption of lifestyles due to clean-up and other activities.

Subsistence foods were tested for evidence of hydrocarbon contamination from 1989-94. No or very low concentrations of petroleum hydrocarbons were found in most subsistence foods. The U.S. Food and Drug Administration determined that eating foods with such low levels of

hydrocarbons posed no significant additional risk to human health. Because shellfish can continue to accumulate hydrocarbons, however, the Oil Spill Health Task Force advised subsistence users not to eat shellfish from beaches where oil can be seen or smelled on the surface or subsurface. Residual oil exists on some beaches near subsistence communities. In general, subsistence users remain concerned and uncertain about the safety of fish and other wildlife resources.

The estimated size of the subsistence harvest in pounds per person now appears to have returned to pre-spill levels in some communities, according to subsistence users through household interviews conducted by the Alaska Department of Fish and Game. These interviews also indicated that the total subsistence harvest began to rebound first in the communities of the Alaska Peninsula, Kodiak Island, and the lower Kenai Peninsula, but that the harvest has lagged behind a year or more in the Prince William Sound villages. The interviews also showed that the relative contributions of certain important subsistence resources remains unusually low. The scarcity of seals, for example, has caused people in Chenega Bay to harvest fewer seals and more salmon than has been customary. Herring have been very scarce throughout Prince William Sound since 1993. Different types of resources have varied cultural and nutritional importance, and the changes in diet composition remain a serious concern to subsistence users. Subsistence users also report that they have to travel farther and expend more time and effort to harvest the same amount as they did before the spill, especially in Prince William Sound.

Subsistence users also point out that the value of subsistence cannot be measured in pounds alone. This conventional measure does not include the cultural value of traditional and customary use of natural resources. Subsistence users say that maintaining their subsistence culture depends on uninterrupted use of fish and wildlife resources. The more time users spend away from subsistence activities, the less likely that they will return to these practices. Continuing injury to natural resources used for subsistence may affect ways of life of entire communities. There is particular concern that the oil spill disrupted opportunities for young people to learn subsistence culture, and that this knowledge may be lost to them in the future.

Recovery Objective

Subsistence will have recovered when injured resources used for subsistence are healthy and productive and exist at pre-spill levels. In addition, there is recognition that people must be confident that the resources are safe to eat and that the cultural values provided by gathering, preparing, and sharing food need to be reintegrated into community life.

Restoration Strategy

The primary way of restoring subsistence is to restore injured resources used for subsistence, such as clams, harbor seals, Pacific herring, pink salmon, sea otters, and sockeye salmon. These are discussed elsewhere in this chapter. Four additional parts of the strategy to restore subsistence are the following:

Promote recovery of subsistence as soon as possible. Many subsistence communities will be significantly harmed while waiting for resources used for subsistence to recover through natural recovery alone. Therefore, an objective of restoration is to accelerate recovery of subsistence use. This objective may be accomplished through increasing availability, reliability, or quality of resources used for subsistence, or increasing the confidence of subsistence users. Specifically, if subsistence harvest has not returned to prespill levels because users doubt the safety of particular resources, this objective may take the form of increasing the reliability of the resource through food safety testing. Other examples are the acquisition of alternative food sources and improved use of existing resources. However, all projects to promote subsistence must be related to an injured natural resource. See Policy 9 in Chapter 2.

Remove or reduce residual oil if treatment is cost effective and less harmful than leaving the oil in place. Removing residual oil from beaches with high value for subsistence may improve the safety of foods found on these beaches. This benefit would have to be balanced against cost and the potential for further disruption to intertidal communities.

Protect subsistence resources from further degradation. Further stress on subsistence resources could impede recovery. Appropriate protection can take the form of habitat protection and acquisition if important subsistence areas are threatened. Protective action could also include protective management practices if a resource or service faces further injury from human use or marine pollution.

Monitor recovery. Monitor the recovery of resources used for subsistence. Also monitor subsistence harvest.

Increase involvement of subsistence users in the restoration process. Increasing participation of community residents will increase their confidence that injured resources will be and are being restored. Increased participation also will improve the results of restoration work, including research and monitoring projects, through the incorporation of traditional and local knowledge.

[Note: This table is modified from p. 32 of the Restoration Plan.]

DRAFT

Table 2. Resources and Services Injured by the Spill

INJURED RESOURCES				LOST or REDUCED SERVICES
Recovered Bald eagle	Recovering Archaeological resources* Common murre Intertidal communities Mussels Pink salmon Sediments Sockeye salmon Subtidal communities ----- *Archaeological resources are not renewable in the same way that biological resources are, but there has been significant progress toward the recovery objective.	Not Recovered Cormorants (3 species) Harbor seal Harlequin duck Killer whale (AB pod) Marbled murrelet Pacific herring Pigeon guillemot Sea otter (in oiled west. PWS)	Recovery Unknown Black oystercatcher Clams Common loon Cutthroat trout Designated Wilderness areas Dolly Varden Kittlitz's murrelet River otter Rockfish	Commercial fishing Passive uses Recreation and Tourism including sport fishing, sport hunting, and other recreation uses Subsistence

Amending the List of Injured Resources and Services. The list of injured resources and services will be reviewed as new information is obtained through research, monitoring, and other studies sponsored by the Trustee Council. In addition, information may be submitted to add to or otherwise change this list. This information can include research results, assessment of population trends, ethnographic and historical data, and supportive rationale. Information that has been through an appropriate scientific review process is preferable. If data have not been peer reviewed, they should be presented in a format that permits and facilitates peer review. Information to change the list will be reviewed through the Trustee Council's scientific review process.

14.2.21

James G King
1700 Branta Road
Juneau, Alaska 99801

RECEIVED
MAR 1 1996
EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

Members of the EVOS, PAG
c/o Restoration Office, 645 G St.
Anchorage, Alaska 99501

Dear Fellow PAG members,

As you know I have been struggling with trying to develop credible "advice" for the Trustee Council about using some Settlement funds for endowed programs that will benefit the damaged resources on into the future. I have attended almost every PAG meeting for the past 4 years. I have tried to achieve an understanding of the interests of all of you as well as what we hear from the public. Herewith is my proposal for your consideration.

I hope you will have a chance to review this before our February meeting so we can discuss it then. Please note it is still in draft form. If you find important omissions please let me know so I can weave them in.

Also please note that this is not a proposal to use any substantive amount of money now. It is "advice" about how and why a formal proposal should be developed to be considered, with what other proposals for use of the Restoration Reserve come to the Trustee Council, in the future.

Thanks and Happy New Year,

Sincerely,

Jim

Jim King,
PAG member, Public at Large.

DRAFT

EXXON VALDEZ OIL SPILL MONEY

The Need To Develop A University of Alaska Endowment Plan
Now!

INTRODUCTION

With half the time and half the money gone, now is a good time to review where we are with the \$900 million Exxon Valdez Oil Spill (EVOS) Settlement and where we want to be when the money is all paid up in 2002. A strong pattern is set:

- 1) Cleanup - Oil can still be found in the spill area but the cleanup has been carried about as far as possible.
- 2) General Restoration - The easy things have been done though there is hope that the research program will disclose some new opportunities.
- 3) Administration - Costs for administering the Settlement funds have continued to decline while efficiency and productivity of the Restoration Office has continued to increase thanks too an outstanding staff.
- 4) Alaska SeaLife Center - The goals of this enterprise have been tailored to fit the Settlement requirements and a major portion of the facility has been funded.
- 5) Research and Monitoring - This continues a big cost. Development of an ecosystem approach has brought a lot of order to this effort and improves the promise of lasting resource benefits.
- 6) Habitat Protection - Purchase of sensitive private lands continues though bargaining is sometimes intense.
- 7) Restoration Reserve - This block of funds which will reach \$108 million, plus some interest, remains the last uncommitted portion of the Settlement.

The Trustee Council will ultimately have to consider various alternatives for use of the Restoration Reserve. It is important that the best possible alternatives be on the table for their own and public review. This paper recommends the Trustee Council ask the Restoration Office and the University of Alaska to prepare a detailed plan to use the Restoration Reserve for endowed academic chairs designed to fulfill the EVOS Settlement obligations.

EVOLUTION

We have watched an interesting recovery evolution since the Exxon Valdez Oil Spill in March 1989. At first, damages were evident to anyone. Administrators and lawyers could address direct cleanup needs and compensations for obvious personal losses. In recognition of more subtle damage, the 1991 civil settlement of state and federal lawsuits required Exxon pay 900 million dollars over a ten year period; "... for the purpose of restoring, replacing, enhancing, or acquiring the equivalent of natural resources injured as a result of the Oil Spill and the reduced or lost services provided by such resources...." It is no longer obvious who and what is still damaged. Expensive studies about how to fulfill the Settlement commitment continue. There is a fear that the money will be used up in the next six years leaving a vacant feeling that more time was needed. This is recognized by the "reopener" clause in the Settlement and by establishment of the Restoration Reserve by the Trustee Council.

THE RESTORATION PLAN

The Restoration Plan, approved by the Trustee Council in November 1994, lays out a basic plan for the 900 million dollars:

A) Annual work plans and administrative costs	21%-25%
B) Habitat Purchase	38%-41%
C) Restoration Reserve	12% -
D) Alaska Sealife Center (Seward)	2% -
E) Reimbursements for completed cleanup work	20% -
F) Adjustments	3% -
	96-103

This plan appears to accommodate most of the factors brought out by the various concerned parties during an exhaustive public review process. The annual work plans include well supported research and monitoring proposals some of which are now clustered under broad ecosystem headings. Habitat acquisition is proceeding and will provide multiple benefits. The restoration reserve is being funded at the rate of 12 million a year. The SeaLife Center is funded and under construction. Items E and F are committed. Some adjustments are possible as the process continues but there is a general consensus that the basic pattern is set.

ENDOWMENT PROPOSED

There is strong support in Alaska to use some of the Settlement money for an endowed program that will continue restoration and enhancement activities in perpetuity. Three years ago President Jerome Komisar, Senator Arlis Sturgeluski, Permanent Fund manager Dave Rose and other Alaska leaders addressed the Public Advisory Group(PAG)

proposing and supporting the concept of an endowed program. In 1993 some 33 thousand questionnaires and 22 public hearings about how to use the Settlement funds produced more than two thousand responses. Two thirds of these respondents favored some form of endowment. About 50 people and organizations suggested endowing academic chairs at U of A, for permanent research and teaching about the damaged resources, even though the University was not mentioned in the questionnaire. The American Ornithologists' Union, The Wildlife Society and The Pacific Seabird Group (international professional organizations) each endorsed academic chairs. The Alaska District, American Institute of Fishery Research Biologists also endorsed endowed chairs at U of A, as did The Assembly of the city of Juneau, the American Bald Eagle Foundation and the Fairbanks Chamber of Commerce.

RESTORATION RESERVE

The Restoration Reserve was set up largely to accommodate those that favored endowments. It does not directly impact the other EVOS activities. The debate on how the Restoration Reserve will be used was deferred and at present there is no firm plan as to how it will be used. It is available at the discretion of the Trustee Council. This is the money that could be placed in an endowment. A number of possibilities will no doubt be considered.

UNIVERSITY OF ALASKA CHAIRS

Support for placing the Restoration Reserve, or part of it, in the University Foundation remains high. There are a lot of attractive aspects to using endowed academic chairs to fulfill some of the Settlement obligations:

- 1) There has been a lot of thought, study and discussion about how to determine when a damaged resource or service is restored thus needs no more funding. This is getting more and more difficult as we get farther from the date of the spill. Do we really need to know the exact moment fish stocks or bird populations are restored to pre spill numbers? Research and monitoring studies can not be relied on for a firm answer. With a perpetual endowed program, restoration could phase into enhancement without having to waste effort to determine the exact point at which the transition happened.
- 2) The existing EVOS Trustee Council could be made a permanent part of the University in order to continue monitoring the program insuring compliance with the Settlement.
- 3) The University of Alaska Foundation is a public nonprofit corporation established in 1974 to manage and invest

donations for the benefit of the University of Alaska. With responsibility for more than 20 million dollars the foundation has an excellent record averaging about 12 percent on investments through the difficult years of the early 1990's. Setting up some new investment agency would seem a waste.

4) An academic chair can be endowed permanently for two million dollars providing salary and overhead for a full professor. Three million dollars would provide for well paid graduate fellowships and some operating funds for the professor. U of A has no such attractive positions now though major universities in all other coastal states do. With such positions U of A would be competitive with any university in the world for attracting top quality professorial and graduate student talent. Advantages of this sort of academic program would include: a) top quality endowed academic programs could provide the sort of good science that the Trustee Council has been funding, to determine the course of restoration and enhancement, without the present time limit, b) University programs would provide a continuing supply of Alaska trained scientists and teachers, c) University studies would produce a flow of professional and popular publications, d) top quality endowed academic talent attracts grants and contracts embellishing their programs thus in addition to the mothering of an injured resource a seed is planted with unlimited potential, e) large University programs could be expected to hire a variety of local specialists and technicians, f) permanently endowed programs contribute to local business thus economic stability, a point not overlooked by other states such as Texas which has put a huge portion of its oil wealth into university endowment.

5) The program would benefit from the prestige of the University in ways not possible for an independent endowed organization.

SOME POTENTIAL ENDOWED CHAIRS

For Damaged Resources

- 1) Ecology of the intertidal zone. This was the most devastated habitat of the oil spill and the place where affects will probably linger longest.
- 2) Ecology of the nearshore ecosystem. To include inflow of riverine nutrients, spawning, perching, nesting sites, shallow waters and bottom resources.
- 3) Ecology of the pelagic ecosystem. This would relate more to oceanography, climate and basic productivity as it affects feeding regimes of birds, mammals and fishes of the oil spill area and beyond.

- 4) Ecology of pink salmon. This is a short cycle salmon easily manipulated by man but for which a long term management strategy is still lacking.
- 5) Ecology of red salmon. A long cycle, extremely valuable salmon for which the role of management is not well developed.
- 6) Ecology of other commercial fish resources. Cod, rockfish, herring and a host of other edible fish resources need long term research to ensure their perpetuation.
- 7) Ecology of birds of the coastal ecosystem. There is world wide interest in the bird resources of the EVOS region that were heavily damaged by the oil.
- 8) Ecology of the pelagic birds of the spill area. Birds that depend on the waters of the Alaskan continental shelf distribute and are valued throughout the north and south Pacific.
- 9) Ecology of bald eagles. Our National Symbol, a species of the coastal fringe that has proven vulnerable to acts of man and can only survive if properly understood and accommodated.
- 10) Sea mammals of the nearshore. Seals, sea lions, sea otters etc. species so valuable that they have been damaged by human exploitation in the past.
- 11) Sea mammals of the pelagic ecosystem. Whales also have been badly depleted by over exploitation and are vulnerable.

) Other opportunities?

For Damaged Services

- 12) Archeology of the spill area. This was a good place to live in prehistoric times and it is important to our future that we learn more about that.
- 13) Anthropology of the spill area. Portions of the ancient culture exist. It was a very successful culture. We should understand why.
- 14) Subsistence uses of the spill area - past tradition, present use and future opportunity. Archeology, anthropology, sociology, psychology, biology and economics are involved. Insight and teachers are needed if ancient traditions are to be understood, perpetuated and enhanced.
- 15) Tourism - opportunity, regulation, economics. The developing world culture seems to have decided what is wanted from Alaska is not resources but rather a scenic

wilderness environment that people from overcrowded lands can visit. They like to see a place as God created it unspoiled by man. How can this world wide interest be accommodated without self destruction? How can tourism grow without destroying residential values?

16) Recreation - opportunity, regulation, economics. How can recreation resources for residents be perpetuated including wilderness visits, sport hunting and fishing, personal use gathering?

17) Coastal community development - planning, engineering, aesthetics. How can the tremendous appeal of Alaska's tiny coastal communities be sustained with the inevitable growth?

18) Commercial fisheries - economics, management. Man has yet to learn how to regulate his use of marine fish for sustained yield.

19) Aquaculture. This is a developing field that will need a lot of attention in Alaska, to make it successful without conflicting with the wealth of natural resources.

20) Management of Alaskan oil resources safely, effectively and economically.

) Other possibilities?

LEGAL QUESTIONS

There are questions about whether putting money into an endowment would be in compliance with the Settlement Agreement. Some solicitors think not. But if the proposal is sound and the public is in support a way can be found:

A) It may require that the Trustee Council somehow be permanently incorporated into the University administration to provide oversight on the EVOS program.

B) A detailed plan will need to be prepared that addresses how the University can comply with the spirit of the Settlement. This plan may call for some sort of new University institute.

C) A new definition of restoration and enhancement may be needed.

D) It may require the signators return to the US District Court for a modification of the Settlement Agreement.

PERCEIVED CONFLICTS

Some opposition to endowments has been voiced. Some of these concerns are reviewed here.

- 1) The Settlement money is limited. There are already more proposals than could be accommodated. Some people would benefit if the money is all spent fast. An endowment would use some money to project and magnify benefits further into the future.
- 2) With endowments there might be less cash for land purchase. Some Native Corporations that need money now would like to sell land. This might be addressed by having some endowed income available for future purchases of lands that might be used for University research or teaching.
- 3) Some believe the money is best spent buying habitat now, specifically inholdings in the regions superlative National Parks, National Wildlife Refuges and National Forests. Again some endowment income might be used for this.
- 4) Some state and federal resource management agencies are suffering from declining budgets and see EVOS funded studies as a way to hold on to some of their staff or programs until other money is available. Some endowed income might be reserved for agency contracts. Ultimately these agencies might benefit most from continuing university research within their area of responsibility and from a supply of Alaska trained professionals entering the job market.
- 5) There might be less money now for contracting with private organizations and companies that are submitting restoration proposals. This is not necessarily so.
- 6) There are proposals to address some public needs at oil spill communities that might not be funded by EVOS money. Any such loss would be offset by longterm benefits.
- 7) There are proposals for research to enhance commercial fishing that may be deferred or reduced in the switch from a short term crash program to a smaller continuing program.
- 8) There is a perception by many in Alaska that our University does not use its money well. They compare University charges with charges by government agencies and for profit corporations. This is an apples and oranges comparison. In most cases the range of social benefits from money spent at a university is far wider than benefits possible from any other organization. We must consider that we have a very technical society that can not survive, as we know it, without the training and research done at universities. If Alaskans do not support an Alaskan university other universities will have to take care of the need for trained people and basic research to manage Alaskan resources.

CONCLUSION

The Exxon Valdez oil spill left an indelible mark on Alaska, its people and its resources that is as permanent in its way as the 1912 volcanic eruption at Katmai or the 1964 earthquake in Southcentral. Part of this mark could be a great benefit to the University of Alaska helping to boost it toward its natural destiny as the premier university of the Pacific Rim, at the same time fulfilling obligations under the EVOS Settlement. A great flowering emerging from the fumes of disaster. Some people believe no other action by the Trustee Council would be more pertinent and significant than creating a permanent endowment with 108 million dollars at our University.

RECOMMENDATION

With these things in mind it would seem most appropriate that the Trustee Council consider University endowments along with what other proposals they may get for use of the Restoration Reserve. It is recommended therefore that the Trustee Council request formation of a University team to work with their Executive Director to design a detailed plan for an endowed University program that will take advantage of all possible opportunities while fulfilling obligations of the EVOS Settlement.

James G King
1700 Branta Road
Juneau, Alaska 99801



BEAR NEWS

VOLUME 11, NUMBER 2 — FALL 1995

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More Kodiak land acquired

Secretary of the Interior Bruce Babbitt signed an agreement to protect 58,000 acres of prime fish and wildlife habitat for bears, salmon, bald eagles and other species on Kodiak Island in perpetuity.

The agreement was signed on November 15 in Washington, D.C., with representatives of the Kodiak Native corporations and the Great Bear Foundation on hand.

"This agreement will protect important fish and wildlife habitat and increase opportunities for hunting, fishing and other outdoor activities in the Kodiak National Wildlife Refuge," Babbitt said. "This agreement marks another major step forward to preserve the salmon resources found on the island and to help promote the restoration of important



Photo Courtesy: National Park Service

EXXON VALDEZ OIL SPILL
TRUSTEES COUNCIL
ADMINISTRATIVE RECORD

RECEIVED
MAR 1 1996

Kodiak land acquisition, continued from Page 1

fish and wildlife populations following the Exxon Valdez oil spill of 1989."

Frank Pagano, president of Koniag, Inc., a Kodiak Native corporation, signed the agreement on behalf of the board of directors and shareholders of the corporation, one of 13 Alaska Native regional corporations, which were established under the Alaska Native Claims Settlement Act in 1971.

The agreement protects 58,000 acres of land in perpetuity. In addition to that acreage, agreement protects another 56,000 acres under a six-year conservation easement. The total cost of the agreement is \$28.5 million, which will be paid from the Exxon Valdez oil spill settlement funds.

The purchase is the third this year from the Native corporations. The total acquisitions will add about 208,000 acres of unspoiled fish and wildlife habitat to the refuge as part of the continuing effort to remedy the damage caused by the 11-million-gallon oil spill.

Federal and state trustees who oversee the \$900 million Exxon settlement fund are negotiating with Koniag to buy the 56,000 acres that are being set aside under the six-year conservation easement. Inside the refuge and are cur-

rently owned by the Natives. They are considered the crown jewel of the four-phase land acquisition because they include the Karluk and Sturgeon river areas that are key habitat for salmon production and brown bears.

The land deals were announced at a ceremony at the World Wildlife Fund offices attended by Secretary Babbitt, Koniag President Frank Pagano, Great Bear Foundation Co-President Joel Zachry, oil spill trustees and other environmental supporters of the purchase.

"Kodiak represents one of the most productive and intact ecosystems anywhere in North America," said Dr. Dominick DellaSala, WWF wildlife ecologist.

"This federal acquisition — backed by everyone from Native corporations to sport and hunting associations and conservationists — provides the momentum for purchasing the remaining 20 percent of private lands within the Kodiak refuge," DellaSala said, referring to the land along the Karluk and Sturgeon rivers.

George Frampton, the Interior Department's assistant secretary for parks and refuges, said the land purchases represent a win-win situation for the residents of Kodiak Island and the wildlife.

"Obviously, Koniag and Kodiak Island residents benefit," Frampton said of the deal. "The land is still available for them to use and it unlocks the economic potential that might otherwise have been hard to do. The U.S. Fish and Wildlife Service benefits by being able to exercise more control over an entire ecosystem."

Oil spill trustees have been criticized for paying more money for the Native lands than they were appraised for, but Frampton vigorously defended the purchase agreements, saying the value of the lands cannot be measured by ordinary appraisal methods.

"What we are buying really is not land — it is restoration value," Frampton said. "There is no way to capture that value in appraisals."

According to the Interior Department, the most recent agreement will help implement the Final Restoration Plan of November 1994, which is designed to help guide efforts to restore natural resources injured by the oil spill. The agreement complements agreements reached with two other Kodiak Native corporations signed in May of this year and reported in the spring issue of Bear News. Together, the three agreements protect roughly 210,000 acres within the refuge boundary.

14.2.21

purchase these small acre parcels from willing sellers. Last June, the Richard King Mellon Foundation stepped forward and purchased 317 acres at the head of Uyak Bay in cooperation with The Conservation Fund. The lands were gifted to the refuge and comprise critical feeding habitat for brown bears — 17 bears have been seen on the property at one time!

The U.S. Congress appropriated nearly \$4 million to the acquisition of Kodiak small parcels in the 1993 and 1994 budgets through the Land and Water Conservation Fund, but that source may be tapped out in the future by the fiscal belt tightening. The Exxon Valdez Trustee Council has identified several Kodiak small parcels for acquisition in its small parcel program, but the oil spill and may not be able to protect all the available parcels without financial partners.

The Kodiak Brown Bear Trust will be calling on the GBF to help find the financial resources to complete one of the truly remarkable conservation achievements of this century.

As part of the May agreement with the Old Harbor Native Corporation, 65,000 acres on Sitkalidak Island in the Alaska Maritime National Wildlife Refuge was protected by a conservation easement which allows some commercial development, including ecotourism, as long as the fish and wildlife resources injured by the Exxon oil spill are not damaged.

GBF representatives toured these Native-owned lands this summer as part of an ecotourism planning mission, meeting with leaders of the Old Harbor Native Corp. and village-based tourism service providers to design a tour that will provide visitors with a world class experience, but not harm wildlife or the rural village lifestyle.

Two other Exxon Valdez land acquisition deals in the Kodiak region provide

a glimpse of what could occur on a larger scale on nearby Afognak Island. In 1994, the Trustee Council purchased 41,000 acres of Native-owned timbered land on Afognak Island and created a state park unit at Seal Bay. On November 21, 1995, the Kodiak Island Borough reached an agreement with the Exxon Valdez Trustee Council to sell 28,000 acres on Shuyak Island to the state of Alaska for inclusion in the state park system. Shuyak Island is the northernmost island in the Kodiak Archipelago, and like much of Afognak Island, is covered with old growth Sitka spruce forest.

The Seal Bay and Shuyak agreements, combined with purchases of Native corporation lands on Afognak Island would represent another world class conservation achievement in the Kodiak region and another outstanding achievement for brown bears.

Negotiations are underway between the Exxon Valdez Trustee Council and the Afognak Native Corporation and Koniag, Inc., who together own the Afognak Joint Venture, which owns the timber rights to most of the coastal forested lands under consideration for protection by the oil spill restoration plan. Again, these lands in the Kodiak Archipelago scored extremely high in their potential to benefit the fish and wildlife species injured by the oil spill.

As much as 140,000 acres on Afognak Island is worthy of protection and the question will be to make the limited Exxon Valdez dollars stretch as far as possible in protecting habitat.

The Kodiak Brown Bear Trust will once again call upon the GBF to help with these very worthy conservation projects. There is certainly more to be done in the Kodiak Archipelago, but it is heartening to recognize how much progress we have already made.

Thank you for your continued help on Kodiak!



Secretary of the Interior Bruce Babbitt (second from right) signed an agreement in Washington, D.C., on November 15 to protect an additional 56,000 acres of land on Kodiak Island. Babbitt was joined in the ceremony by Great Bear Foundation Co-President Joe Zachry (right), Archeologist/Old Harbor representative Sven Haakanson, Jr. (left), and Dominick DellaSala of the World Wildlife Fund.

Alaska Week in Review

By The Associated Press

Bristol Bay hospital threatens service cutoff in tax dispute

Kanakanak Hospital, the only one within a 46,000-square mile swath in southwest Alaska, says it may quit offering all but emergency care to non-Natives because of a tax impasse with the city of Dillingham.

A spokeswoman for Bristol Bay Area Health Corp., which runs the federally funded hospital, said non-Native service would be curtailed after Nov. 22 unless ongoing negotiations are successful. The hospital board, which includes representatives from 33 villages, had reached no decision Nov. 20 and said it would continue discussions Nov. 21.

MarkAir Express follows parent company into bankruptcy

MarkAir Express sought the protection of the U.S. bankruptcy code Nov. 17, filing a Chapter 11 petition three weeks after its parent company lost any hope of flying again.

The rural airline, which serves cities in the Bush from its Anchorage base, said it would continue to fly from Anchorage to McGrath, Sand Point, Dutch Harbor and Nikolski.

Airline president Mike Bergt told KTUU television in Anchorage that the cargo service also would continue as scheduled.

Native-owned Cook Inlet Region acquires interest in coal site

Cook Inlet Region Inc. has purchased rights to an undeveloped coal project near Palmer, gambling that it will be able to extract more than 15 million tons of coal at the Wishbone Hill site.

North Pacific Mining Corp., a Cook Inlet subsidiary, finalized purchase in August of land leases and mining permits from Japan-based Idemitsu Alaska.

Idemitsu last year announced it wanted to abandon the coal project after investing \$12 million and waiting seven years to begin mining. The company had planned to provide coal to Japanese utilities and create an estimated 200 jobs in the Matanuska-Susitna Borough.

based weekly, needed was a printer with a press that worked.

"I was getting a little nervous," he said in a telephone interview Nov. 22. "People say newspapers fold, they don't start up anymore. We're setting out to prove everyone wrong."

The Paper hit the streets as scheduled Nov. 22, in time to fulfill commitments to pre-Thanksgiving Day advertisers.

Dissidents push headquarters move for Koniag Native corporation

KODIAK — A group of Koniag shareholders wants to relocate corporate headquarters from Anchorage to Kodiak and has made the issue a focus of its proxy campaign.

A move would establish the Native corporation as an "economic influence" in Kodiak and help foster Native leadership, a proxy statement says.

Koniag Inc., which represents Kodiak Island Natives, is among 12 regional corporations established in 1971 under the Alaska Native Claims Settlement Act.

Corporation officials say that of 3,400 shareholders, about one-third live on Kodiak Island, one-third live elsewhere in Alaska and the rest are dispersed among the other states.

Koniag's annual shareholders meeting is scheduled Dec. 2 in Seattle. Three board members will be elected. The corporation has nominated three current members for retention: Frank Pagano, Koniag president since 1985; and Thomas Panamaroff and Glenn Godfrey Sr.

State DEC official named to oversee pulp mill cleanup

SITKA — A state environmental regulator skilled in risk assessment will oversee Alaska's cleanup plan for the defunct Alaska Pulp Corp. mill, which has been evaluated for listing as a federal Superfund site.

Richard Cormack, a Department of Environmental Conservation technical services manager, said he had no "preconceived notions" about the task.

While managing the hazardous waste program for the DEC's northern regional office in Fairbanks from 1988 to 1990, Cormack was responsible for state oversight of the Environ-

One Man's

By Robert

THE COLONEL

LONDON — Although Anchorage Mayor F I first started writing these columns, I ne title. It is usually all I can do to get the tex to come up with the perfect *bon mots* to en however, I am making an exception for the f demands — it.

Colonel H. Stuart Townend is the Headmaster school my two boys attend here in London. Dur the case on prior visits back home, the mos acquaintances are about the schooling exp degrees of trepidation about what is happeni concerns what is it about the boys' school i schools in Alaska? The answer for me is, in a v Colonel.

The Colonel is Hill House. For the last since he founded Hill House with his late Colonel has dedicated himself body and so education and molding of young boys and, si young girls for whatever life may bring them leave his school as young adults. At a time of most other men would be enjoying regular golf in sunnier climates, the Colonel will ha it. "The work is too important," he will tell y "What happens to a boy and girl between t in most respects, once and for all," as the Co Afterwards, they can be developed, but onl The goal, therefore, is not just to teach ho treat peers (who often as not at Hill Ho different" and how to take responsibility f live productively in a civilized society. If th schooling techniques, I guess it is. Bu preservation so important.

And so he continues on, doing what he l as he has for most of the last half of hi members; personally determining whic assemblies where all 1,050 students and see him hand out athletic and academic a every Thursday through Sunday to the s lead 20 or so London-based students in introduction to outdoor and boating sc the school year. If his sounds like a sc is. But for him and the school, it work

Undoubtedly, the Colonel's 15 year which he is universally called and i contributed to both his stamina and to he will be the first to claim that the l

See CIL, back page

Fund could enhance riverbank

By MELISSA DeVAUGHN
Peninsula Clarion

The Kenai City Council is hoping it may get some Exxon Valdez Trustee Council money to make improvements along the Kenai River.

A new fund, called the Kenai Habitat Restoration and Recreation Enhancement Project, has been designated to help restore public lands along the Kenai River that were indirectly affected by the 1989 Exxon Valdez oil spill. Damage on the Kenai after the spill was twofold: Over-escapement of fish was expected to lead to smaller runs in the future, and since fishing was closed in areas near the spill, fishers came in droves to the Kenai Peninsula, damaging banks and causing excessive erosion.

In discussing possible projects at Wednesday's meeting, the council liked the idea of building boardwalks along the Kenai River flats at Bridge Access Road, or making improvements at Cunningham Park on Beaver Loop Road. However, the members ultimately agreed that the council should address re-establishing the dunes along the mouth of the river. It plans to ask the state to be considered for the project, which will include river access, stairs to the dunes near the beach side and interpretive signs to guide visitors.

See COUNCIL, back page

Peninsula Clarion
Nov. 8-10, 1995

Council

Continued from page 1

If it gets the money, it will be up to the city to maintain the improvements once constructed.

"I felt if we were really going to be realistic and go after some habitat money, we should start at the mouth of the river with interpretive signs and boardwalks through it and tell (visitors) why it is important," said council member Jim Bookey.

The Alaska departments of Fish and Game, and Natural Resources are managing the enhancement project, and so far, it has received several proposals, said Chris Titus, Alaska State Parks Kenai River superintendent.

"Soldotna has a proposal at Centennial Campground," she

said, "but the borough probably won't make any proposals because they're not in the recreation management business."

State Parks is interested in receiving money to improve bank access and install bathrooms in Kenai Keys near Torpedo Hole. It also wants to improve floating docks at Funny River, Big Eddy and Ciechanski recreation sites.

"This is going to be geared toward public lands," Titus said. Federal lands also will be considered for projects, she added.

"As long as they're looking for money for projects to do, should we get that out of the drawer?" asked Mayor John Williams of the boardwalk project along the flats. That project, which included extending a boardwalk and installing interpretive signs, was tabled amid other projects.

Council member Linda Swarner said she'd rather see improvements to Cunningham Park which needs better river access and bank stabilization, but Bookey said he'd prefer to repair the dunes at the mouth of the river.

"Let's ask the administration to contact (Fish and Game) and tell them we want to participate," Williams said. "If they only allow one project, we'll put all of our efforts into the dunes. If there's more than one, we'll include Cunningham Park."

Even if the city does get money to complete one or more restoration projects, it will likely be up to three years before work is actually done. A preliminary meeting will be held today in Anchorage to discuss project possibilities. Titus said there are 30 to 40 ideas so far, but the list has not been completed.

Council to reconsider youth center equipment

By Eric Fry

LOG Staff

The new youth center on the ground floor of the community center would have new furniture, two new regulation-size pool tables and two smaller ones for little kids, a Sony play station, a console TV, a VCR — and a computer linked to the Internet.

That is, if the City Council approves a \$30,000 to \$36,000 appropriation.

The council appropriated \$30,000 Monday to furnish and equip the youth center, down from the administration's requested \$36,442. But Councilman Bruce Sieminski asked for a reconsideration on Tuesday. He wasn't available for comment at press time.

Council members were concerned Monday that the city wasn't looking hard enough for local suppliers, and they balked at an estimated \$4,762 in shipping fees.

Councilman Dave Crane said local merchants might give the youth center a break in prices just to help out. "People want it to be done locally, because then there's an ownership in the facility," he said. "Businesses would be glad to cut their profits to go in on the facility."

The equipment wish list was developed by the Parks and Recreation Department and the Seward Teen Council. Good equipment and furniture would make the center more inviting, teens said in a letter to the council. And they offered to help maintain the equipment and enforce its proper use.

The \$4,525 for the center's computer budget includes \$3,150 for a computer with a fax and modem; \$715 for software; and \$500 for long-distance Internet access for the remaining six months of this fiscal year.

Computer users would pay a fee for a set time slot, said Karin Sturdy, the Parks and Rec director. The amount hasn't been decided yet. And she assured the council that the center would block access to forums on the Internet that

News briefs

tor and freezer, folding wall, windows, floor coverings, lighting, doors, and construction of the interior rooms.

Parks officials to meet new neighbors

The Bureau of Land Management conveyed 43,598 acres in Kenai Fjords National Park this month to the Port Graham Native village corporation, BLM officials said.

And the agency expects to convey about 16,000 acres in the park to the English Bay corporation, of Nanwalek, at the beginning of the new year. After that, a further 15,688 park acres would someday be passed along to English Bay, officials said.

The Native corporations selected the land as part of the Alaska Native Claims Settlement Act of 1971.

When it's all over, the national park will have 40 percent of its former coastline, park officials said. But they've worked out 25-foot-wide easements for trails leading to federal uplands, one-acre easements at the base of trails, and one-acre shoreline waypoints for kayakers, said Chief Ranger Peter Fitzmaurice.

Park officials had once hoped to buy back the land from the Natives, using funds from the Exxon Valdez oil spill settlement. Port Graham doesn't want to sell, Fitzmaurice said, but English Bay is still interested in negotiating.

Meanwhile, park officials plan to meet this week with Port Graham representatives to talk about cooperating in managing the shore.

Park superintendent Anne Castellina said she expects the parties will create a model partnership agreement that will preserve the whole ecosystem. "I know that's what Port Graham wants. I know that's what English Bay wants."

liquid could then be transported throughout Prince William Sound communities and by rail to Seward.

"Seward is going to be a very important strategic storage place for us," Avecac said in an interview. But a company document shows that it doesn't expect to build the Whittier plant until 1999.

The company had hoped to buy natural gas at a discount from the state's royalty supplies. The state has already turned down that request. Cook Inlet produces about 200 billion cubic feet of natural gas a year, state officials said. Alaska Intrastate wants to buy about 10 billion cubic feet a year.

Ketchikan Pulp wants land

The City Council gave City Manager Ron Garzini the go-ahead Monday to pursue a land lease with Ketchikan Pulp Co.

The company wants to store beetle-killed spruce logs on 3.37 acres at the Seward Marine Industrial Center prior to barging them to Ketchikan in the summer.

The company's proposal for two lots near North Dock would have what the city calls an "incentive" rent of 10 cents a square foot a year, or \$1,223 a month.

Ketchikan Pulp has proposed paying wharfage of 75 cents a ton, less than the city's \$3 a ton tariff. And the company has proposed paying the city's usual moorage rates for vessels of \$1 a foot a day.

There will be a public hearing before the council if the lease is for more than 120 days, Garzini said. He has the authority to enter into a shorter lease.

Paul Slenkamp, representing Ketchikan Pulp, told the council it was a trial to test the feasibility of transporting trees from the Kenai Peninsula to the company's mill in Ketchikan. The log yard would employ only one or two people, he said.

The company has bought harvest rights to about 1.5 million board feet of beetle-killed spruce in the Chugach National Forest.

timber supply allow.

The log yard wouldn't significantly spread the beetles, Seward, Slenkamp said.

State to Bardarson: Pay up

The state Public Official Commission has fined city planning commission chairman Blaine Bardarson \$1,549 for delays in filing conflict of interest statements.

Part of the fine, \$69, is for filing his statement 24 days late in 1994. The majority of the fine, \$1,480, is for not filing a complete statement in 1993 until 148 days after it was due. The fines were \$10 a day.

The conflict of interest statement was missing a list of real estate interests, said Na Freeman, administrative assistant at the commission. The age sent Bardarson a letter at the time.

"If he had responded within 30 days he could have avoided penalty," she said. Bardarson was given a further option of paying the penalty within 30 days and having the fine reduced to \$200 or \$500, she said.

Bardarson said conflict of interest statements are a bureaucratic redundancy. Property information is available from the borough said.

The commission doesn't ask the attorney general's office to collect fines unless they're at least \$2,000, Freeman said. Bardarson's fines for his previous transgressions won't increase. "It would be carried on the books," she said.

ATHLETES Congi



Exxon Valdez funds to provide outlet for amateur archaeologists

State archaeologists who have had little success curbing illegal collecting in the past hope to harness artifact-inspired energy in a new way this spring.

Using funding provided by the Exxon Valdez Trustee Council, the Division of Park and Recreation's Office of History and Archaeology is launching a \$48,000 program to train volunteers to help watch sensitive archeological sites and cut down on pilfering.

"We're trying to get folks interested in monitoring sites being damaged by collectors and sites eroded by tides," said state archaeologist Doug Reger. "It's not going to save every site, but it will give us ammunition to get the dollars to salvage (artifacts) or stabilize erosion taking place."

To make sure that the state isn't just recruiting more foxes to watch the chickens, Reger said that the volunteers will be carefully assessed.

"We'll try to get people with a real interest in archaeology and screen out those who are more inclined to be just collectors."

Reger named Kachemak Bay as a problem area for both natural and collector-caused damage to sites, second to Western Alaska.

A permit is required to take artifacts from state or federal sites, and the Alaska Historic Preservation Act specifies minimum educational credentials — a B.A. degree in anthropology or a related field and field experience — required for the permit to be issued.

Federal standards are even higher, requiring a graduate degree in anthropology.

"We understand the interest and encourage it in the general public, but we also try to get the message out that taking artifacts out of context in which they could be interpreted by someone with archaeological training diminishes the find," Reger

said.

"If you came on an archaeological campsite and removed something ... you can't say the age of the object or who the people were. It's hard enough to answer those questions anyway. It's often impossible if it's removed."

Well-intentioned beachcombers often pick up artifacts fearing that tides will wash objects away, Reger said.

State archaeologists ask that finders first try contacting a park ranger or museum staff to come to the site and collect the object in a scientific manner. If that isn't possible, the state asks people to try to doc-

ument the location where the object was found by noting landmarks and taking photographs.

The Pratt Museum also tries to harness archaeological enthusiasm by welcoming volunteers to join professional digs or to join the 20 volunteers already doing curatorial and interpretive work at the museum.

"There is an intense interest in archaeological materials and prehistory in this community," said Betsy Webb, Curator of Collections at the Pratt.

For more information about the state stewardship program, call Reger at (907) 269-8725.

Alaska Journal of Commerce
1/1/96

The Exxon Valdez Oil Spill Trustee Council has approved a 1996 work plan with funding totaling \$18.1 million. The plan also supports restoration, research and monitoring of areas affected by the spill. The plan calls for support of several projects: the Sound ecosystem assessment, nearshore vertebrate/predator ecosystem project and the seabird/forage fish ecosystem project. Researchers report that results from recent Pacific herring studies in Prince William Sound continue to forecast small returns, and that some seabird and marine mammal populations affected by the spill have not recovered to pre-spill levels. Trustees approved more than \$4 million for this year's restoration work, included with other council budget considerations.

The Community Association Institute will sponsor a seminar Jan. 20 from 8:30 a.m.-4:30 p.m. at the Ramada Inn. Cost is \$35 at pre-registration and \$45 at the door. The workshop will cover topics including condominium and home owner association laws, management and finance. To register, call Ryan Roley at 276-2535.

SEATTLE

Alaska Airlines is offering two-for-one fares for 34 Alaska destinations for travel between Jan. 7-Feb. 29. Tickets must be purchased at least three days before planned departure. The deal requires that the two people must travel together and stay over at least two consecutive nights or one Saturday night, and one of the travelers must be 18 or older. Round-trip fares include Anchorage-Fairbanks at \$142; Anchorage-Juneau or Sitka at \$288, and Juneau to Sitka at \$98. Also, the airline has established a Dine Air Program to apply restaurant dollars toward frequent flier miles. For every dollar spent, mileage program members will receive three miles for the mileage plan. The program includes 150 West Coast restaurants and a minimum purchase of \$20 is required. To receive credit, members must present their Mileage Plan card or Alaska Airlines/Seafirst credit card.

WASHINGTON, D.C.

The National Oceanic and Atmospheric Administration has awarded a bronze medal to the National Marine Fisheries Service Alaska Region's Restricted Access Management Division. The division was honored for its work in implementing and managing the Pacific halibut and sablefish Individual Fishing Quota program. Division chief Philip J. Smith and the 14-member staff were honored at a ceremony in Silver Spring, Md.

Lethcoe moves office to Juneau

The Alaska Wilderness Recreation and Tourism Association is moving its offices from Valdez to Juneau, and has hired an executive director, the organization announced.

Steve Behnke was hired as AWRTA's first Executive Director. He will also serve as the executive director of the Alaska Institute for Sustainable Recreation and Tourism, the research and information sister organization of AWRTA.

"The Board of Directors was impressed with Mr. Behnke's management skills, extensive knowledge of rural Alaska, and experience working with elected officials. We look forward to working with him to help Alaskan eco-tourism business experience economically and environmentally sustainable growth," said Nancy Lethcoe, Board president.

Behnke will assume responsibilities Jan. 15.

The new address for AWRTA is P.O. Box 22827, Juneau, 99802; phone is 907-463-3038; fax 907-463-3280.

Birders ready to count

The Valdez Audubon Christmas Bird Count will be held Saturday. Anyone interested in birding is invited to participate, said birder Nancy Lethcoe. The annual event begins with breakfast at the Totem Inn at 8 a.m. to discuss different types of birds the group hopes to view and the best places to find them. Bird-watching information will be handed out. The count begins at 9 a.m. Lethcoe said those planning on participating may want to bring a bird identification book, binoculars or a spotting scope, although those items are not necessary.

She said birders can also participate from their home by counting the birds at backyard feeders. She said home birders should record the species and number and call her at 835-5175 to give the results.

NOTICE

Salamatof Native Association, Inc. shareholders
RE: EVOS offer for SNA, Inc. Moose Range Meadows Subdivision properties, 1377 acres on the Kenai River.

This notice is to inform you that the Board of Directors of Salamatof did not and will not accept the offer of 2.3 million dollars for our properties along the Kenai River within Moose Range Meadows subdivision.

Contact the office at 907-283-7864 for further information.

ADN 12/27/95

278,890 acres in Kodiak area now public

By SUE JEFFREY
Mirror Writer

After years of public hearings, land appraisals and negotiations, the Exxon Valdez Oil Spill Trustee Council land acquisition program in Kodiak is winding down.

"Though we are continuing to negotiate for Afognak Joint Venture lands (on Afognak Island), we are now focusing on protection in Prince William Sound," said EVOS trustee council executive director Molly McCammon.

Trustee council land purchases span the length of the Kodiak Island archipelago, from Shuyak Island to the south end of Kodiak Island.

To date, the council has bought 278,890 acres of critical Kodiak wildlife habitat lands. In return, landowners have received a total of \$170.6 million.

The land acquisition program not only protects wildlife habitat, it has also contributed to Kodiak's economic stability.

"The Shuyak sale gives Kodiak a place to establish eco-tourism for the long term," said Kodiak Island Borough Mayor Jerome Selby. The sales agreement transfers the Shuyak parcel to the state, anticipating that the Legislature will make it part of Shuyak Island State Park.

The Shuyak Island sale will be placed in a facilities fund, or permanent fund. The fund will pay for maintenance on borough buildings around Kodiak Island and will keep the lid on property taxes for years to come, Selby said.

Likewise, Native corporations have established permanent funds which will increasingly benefit shareholders as fund investments grow, generating income for dividend checks.

Most of the parcels sold around Kodiak Island were Native corporation lands, originally National Wildlife Refuge lands which were selected under the 1971 Alaska Native Claims Settlement Act. The majority of the parcels are located near Native villages at the heads of bays near salmon streams.

Under trustee council/Native corporation land sale agreements, most of the Native parcels will become refuge lands.

"These purchases are reconstructing the original refuge," said Kodiak Island Borough appraiser Pat Carlson.

"More than 75 percent of all Native corporation lands within the refuge have been returned to the refuge," he said.

The following land sales have been finalized:

- Shuyak Island—the trustee council bought a 26,665-acre parcel on Shuyak Island for \$42 mil-

See Shuyak, Page 6

Shuyak—

Continued from Page 1

lion from the Kodiak Island Borough. At the same time, the council set aside \$1 million to purchase small Native allotment parcels in Uyak Bay currently in foreclosure.

• Afognak Island—the trustee council bought 41,549 acres of forested land on Seal Bay and Tonki Cape at the north end of Afognak Island from Akhiok-Kaguyak, Inc. and Old Harbor Native Corp., doing business as Seal Bay Timber Co., for \$39.6 million. The parcel is now the Afognak Island State Park.

The trustee council is negotiating the purchase of another 48,728-acre parcel on Afognak Island. Most of the land is adjacent to the Seal Bay parcel with one portion bordering Shuyak Strait.

The trustee council says it will pay up to \$70 million to Afognak Joint Venture, the landowners.

• Old Harbor area lands—the trustee council bought 29,100 acres near Old Harbor and conservation easements on 3,000 acres in Midway and Barling Bays from Old Harbor Native Corp. for \$14.5 million.

The Native corporation also agreed to preserve 65,000 acres of land on nearby Sitkalidak Island as a private wildlife refuge.

The council contributed \$11.25 million toward the purchase price, with the remaining \$3.25 million generated from the Exxon Valdez federal criminal restitution fund.

• South end, Kodiak Island lands—the trustee council bought

76,646 acres on the south end of the Aliliuk Peninsula and the heads of Portage, Sulua, Kiavak and Kaiugnak bays and conservation easements in Olga, Moser, Jap and

for \$46 million.

The trustee council contributed \$36 million toward the purchase price with the remaining \$10 million generated from the federal criminal restitution fund.

• Uyak Bay and Karluk River lands—the trustee council bought 59,691 acres in Uyak Bay and portions of the Karluk Lake area and conservation easements, until the year 2001, on 56,048 acres along the Karluk and Sturgeon River drainages, from Koniag,

Inc. for \$28.5 million.

The trustee council contributed \$21.5 million toward the purchase price with the remaining \$7 million generated from the federal criminal restitution fund.

It is also

negotiating with Koniag to purchase surface title to the 56,048-acre parcel currently in the Karluk and Sturgeon River conservation easement and has set aside \$16.5 million toward the purchase price.

The trustee council has also offered landowners \$213,000 for 56 acres at the mouth of the Ayakulik River and 21.5 acres at the Karluk River Lagoon.

Negotiations continue, as well, for purchase of the Triplet Islands off Spruce Island, which are owned by Ouzinkie Native Corp. The islands, totalling 60 acres, would become part of the Alaska Maritime Refuge.

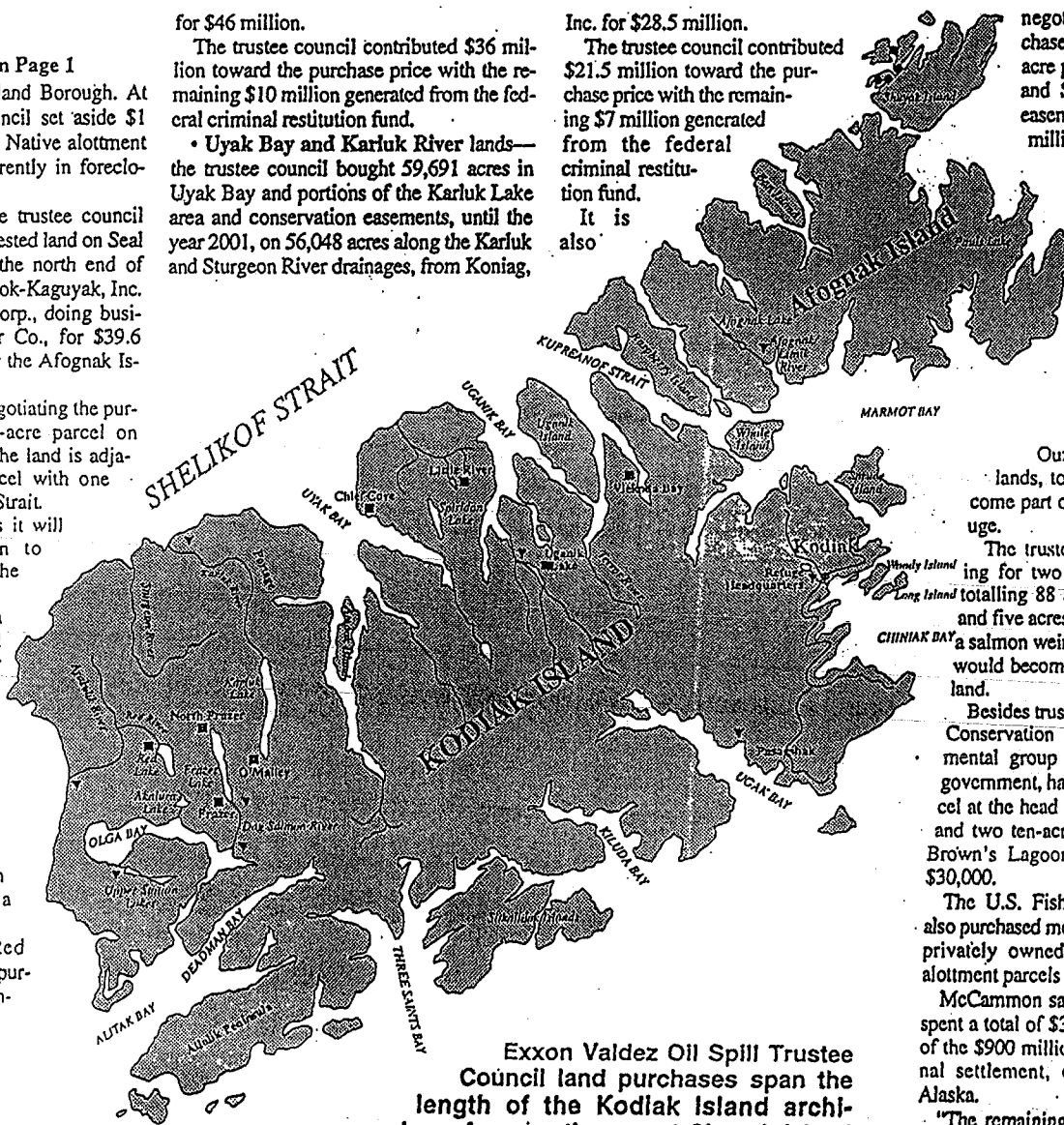
The trustee council is also negotiating for two Native allotments parcels, totalling 88 acres, at Three Saints Bay, and five acres on the Karluk River where a salmon weir site is located, all of which would become National Wildlife Refuge land.

Besides trustee council acquisitions, the Conservation Fund, a national environmental group working with the federal government, has purchased a 314-acre parcel at the head of Uyak Bay for \$600,000 and two ten-acre parcels at the mouth of Brown's Lagoon near Amook Island for \$30,000.

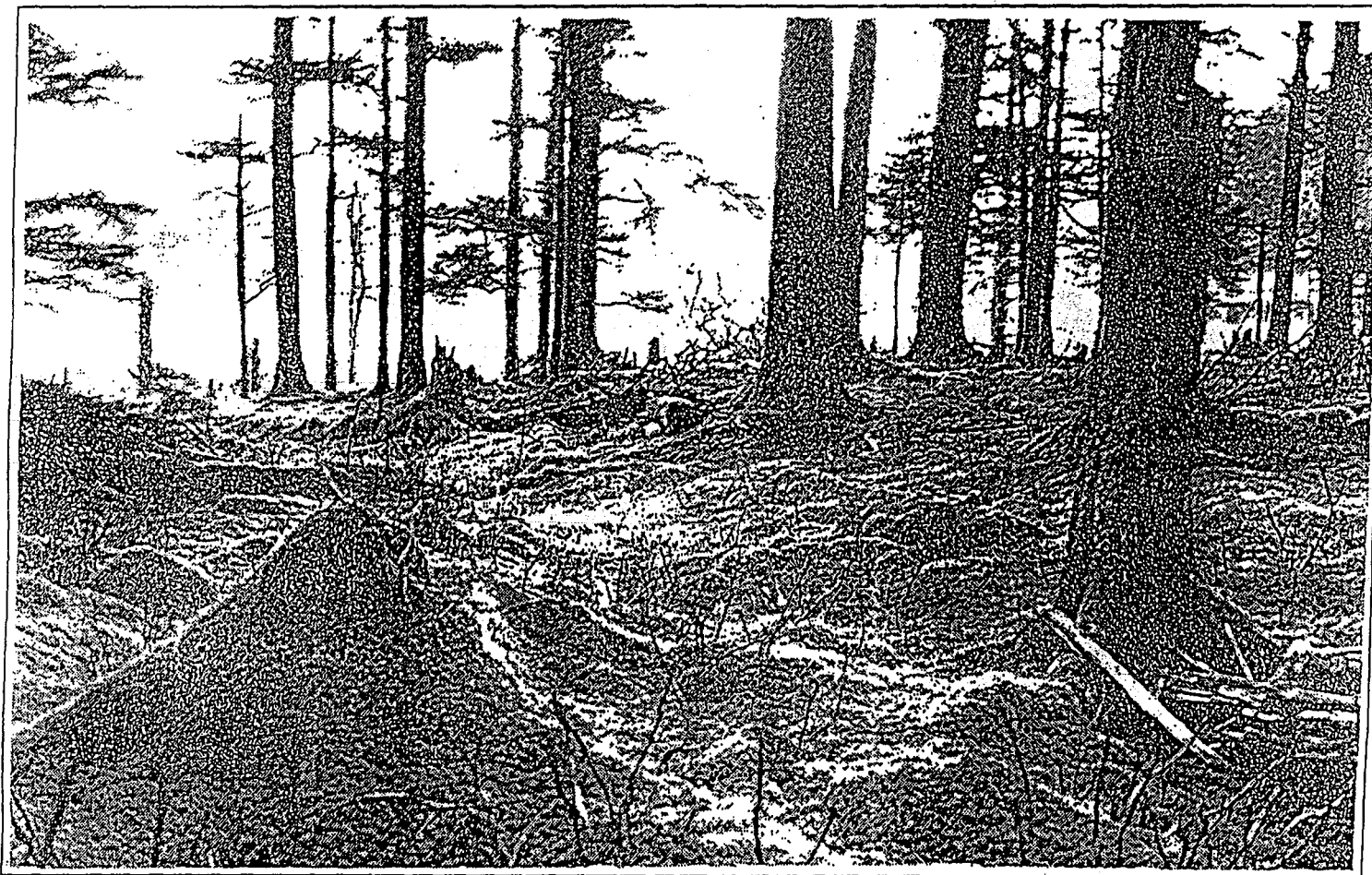
The U.S. Fish & Wildlife Service has also purchased more than 500 acres of small, privately owned non-Native and Native allotment parcels within the refuge.

McCammon said the trustee council has spent a total of \$375 million, or 40 percent of the \$900 million from the Exxon criminal settlement, on land acquisitions in Alaska.

"The remaining money will fund ongoing research programs with some held in restoration reserves, which will also go to research," McCammon said.



Exxon Valdez Oil Spill Trustee Council land purchases span the length of the Kodiak Island archipelago, from northernmost Shuyak Island to the Aliliuk Peninsula at the south end of Kodiak Island.



Sue Jeffrey photo

A rainforest of virgin Sitka Spruce blankets Shuyak Island. The borough wants the state Legislature to make the Shuyak parcel it recently sold to the Exxon Valdez Oil Spill Trustee Council part of the Shuyak Island State Park.

May 22

Refuge to grow by 150,000 acres

In the first of three 1995 Kodiak land deals, the Exxon Valdez Trustees Council agrees to buy Kodiak Archipelago lands to protect habitat from development. The money comes from the more than \$900 million Exxon paid as a result of the 1989 oil spill. The Akhiok-Kaguyak and Old Harbor Native corporations agree to sell 150,000 acres on the southeast side of Kodiak Island for a combined total of \$60.5 million.

Nov. 19

Koniag agrees to \$28 million for 60,000 acres in Uyak Bay

In the year's second major Kodiak land deal, the Exxon Valdez Trustees Council buys acreage from the Koniag Regional Corporation and transfers it to the National Wildlife Refuge.

Nov. 21

Shuyak land deal nets borough \$42 million

In the year's last major land deal, the borough sells 26,000 acres on Shuyak Island to the Exxon Valdez Trustees Council. The land will become part of a state park.

The local government will use \$6 million from the sale to build a research facility on Near Island. It will put the remaining \$32 million in a permanent fund, the interest from which will help pay to maintain borough buildings.



Geoff Hanney photo

Ready for launch

Gov. Tony Knowles signs legislation to help finance the Kodiak Launch Complex. Kodiak Island Borough Mayor Jerome Selby and Pat Ladner, executive director of the Alaska Aerospace Development Corporation, witnessed the ceremony in the Borough Assembly Chambers.

Anchorage Daily News January 7, 1996

Famous display gets scant fanfare

By NATALIE PHILLIPS
Daily News reporter

Six years ago, the little museum in Homer created an exhibit about the Exxon Valdez oil-spill. The exhibit became famous and toured the country. Millions of people saw it. And now, that exhibit is making its debut in Anchorage.

But not with much fanfare.

The exhibit, "Darkened Waters: Profile of an Oil Spill," opens today at the Anchorage Museum of History and Art. But unlike the dozen other museums — including the Smithsonian's National Museum of Natural History in Washington, D.C. — where the exhibit has appeared, no opening reception was planned. Nor was there anything special to draw the public or school children to see it.

The exhibit's creator suspects that has something to do with where some of the museum's financial support comes from. "Anchorage is an oil town," said Mike

O'Meara, a guest curator at the Homer Pratt Museum.

"I don't feel particularly comfortable with it," acknowledged museum director Pat Wolf. In fact, if displaying the exhibit wasn't part of an agreement among the state's three largest museums, it never would have been brought to Anchorage, Wolf said. "It's not in our field of expertise."

"The only reason I agreed to do it is because I was informed that it was balanced. I would not have shown it if it was not," said Wolf, who talked to the director at the Smithsonian museum before making her decision.

Wolf said she did not discuss the exhibit with local oil industry officials, who contribute no more than \$30,000 of the museum's annual \$3 million budget.

No reception was planned because of other current significant exhibits and events and no school programs were set up because the museum's education director is going to be on vacation, Wolf said. Besides, "we don't do receptions

for all the exhibits, only when there is an artist or someone affiliated with it," she added.

Officials with the Exxon Valdez Oil Spill Trustee Council — which oversees post-spill studies and restoration — were surprised the museum did not call for help in setting up educational programs related to the exhibit, said the council's executive director, Molly McCammon. "We have lots of experts."

Over the years, council staff have gotten calls from museums around the country seeking that kind of help. When the exhibit appeared in Juneau, the museum there arranged a discussion panel. In Fairbanks, where the exhibit is headed next, a lecture series is scheduled.

The exhibit was created by Homer artist O'Meara in 1989 in the weeks after the Exxon Valdez oil tanker ran aground in Prince William Sound, spilling 11 million gallons of oil.

Please see Page B-3, EXHIBIT

Oil-spill exhibit comes to town

Anchorage Daily News 1/7/96



Volunteer Darnell Little fastens down an exhibit of oil-spill workers' clothing Friday at the Anchorage Museum of History and Art. "Darkened Waters: Profile of an Oil Spill" opens today. Homer artist Mike O'Meara created the exhibit.

FRAN DURNER / Anchorage Daily News

EXHIBIT: Oil-spill display to debut with little fanfare

Continued from Page B-1

It was an immediate hit. "We had people from all walks of lives saying, 'Take this Outside,'" O'Meara said. The Homer museum exhibit — though modified and updated — still stands. And a traveling, updated replica was created.

It includes a map of the United States and a template, which can be moved to see how much land the spill would have covered. Visitors also get to see and smell a barrel of crude oil; touch a sea otter pelt; listen to recorded interviews with Native villagers affected by the spill; and hear a recording of Capt. Joseph Hazelwood when he radioed the U.S. Coast Guard to report he was "fetched up, hard aground" off Bligh Reef.

The exhibit made a test run Outside in 1991 at the Oakland Museum in California. "We did an extensive visitor research proj-

Anchorage Daily News 1/7/96

No reception was planned because of other current significant exhibits and events and no school programs were set up because the museum's education director is going to be on vacation.

ect to see how long people spent reading the labels and what they learned," O'Meara said. "Basically, we found out that people spent more than twice the amount of time in the exhibit than they traditionally do and did twice the amount of reading."

From Oakland, the exhibit went on to make 11 more appearances — in-

cluding stints in Pittsburgh, Los Angeles, San Diego, Boston, Seattle and Bettendorf, Iowa — before arriving in Juneau in November. After appearances in Anchorage and Fairbanks, the exhibit moves on to Oregon, Delaware and New Jersey.

"I was sorry we couldn't have it longer," said Mark Daughhetee, curator of ex-

hibits at the Alaska State Museum in Juneau. "We had every sixth-grader in town come to see it. It was a good show for Alaska. One of the most significant pieces of state history. And it's pretty level."

In the early years of its travels, the exhibit was shadowed by the Exxon public relations machine. In the spring of 1992, when it arrived in Palm Beach, Fla., the local paper reported that an Exxon public relations firm was circulating company oil-spill studies that refuted parts of the exhibit.

Company officials have not seen the exhibit in several years, according to spokesman Ed Burwell. So "we don't know if the exhibit has been improved."

"We were concerned that the original exhibit was very unbalanced and failed to convey the dimensions or effectiveness of the cleanup effort and the extent of recovery."



Homer News

Mike O'Meara put together the Exxon Valdez oil-spill exhibit that goes on display today at the Anchorage Museum of History and Art.

Alyeska finishes otter facility in Valdez

VALDEZ (AP) — Construction of an \$870,000 otter rehabilitation facility at the Valdez Marine Terminal has been completed, Alyeska Pipeline Service Co. has reported.

The facility is equipped to clean, dry and provide veterinary assistance to sea otters, the company said. The new center will be able to house as many as 100 otters at a time.

After the 1989 Exxon Valdez oil spill, dozens of sea otters were brought to impromptu centers in coastal communities where volunteers tried to remove sticky crude oil from their coats so they could be returned to the wild.

Shuyak Island land purchase

One of the first activities of this session was a meeting of the Legislative Budget and Audit Committee to review some of the provisions of the Exxon Valdez Oil Spill Trustees Council purchase of lands on Shuyak Island. The sale will provide \$42 million to the Kodiak Island Borough, and the

borough is committing \$6 million of these funds to the construction of the Near Island Research Facility. As the remainder is paid over the next seven years, the monies will be dedicated to a municipal facilities maintenance fund.

The Budget and Audit Committee gave its unanimous approval for the deal to proceed. There may be legislation introduced in the future to clarify how the state will manage the Shuyak lands but the monetary transactions can now go forward as scheduled. Mayor Jerome Selby, Molly McCammon from the trustee council, and state attorney Craig Tillery should all be commended for a job well done on completing this deal. This appears to be a win-win venture for the Kodiak Island Borough, the state of Alaska, and the ecosystem on Shuyak.

Alyeska Builds Sea Otter Rescue Center

THE TERMINAL— Alyeska says it has completed a sea otter rehabilitation center at the Valdez Marine Terminal at a cost of \$870,000.

The rehab center is on stand-by status and will be activated only if sea otters are oiled in future oil spills.

It consists of 16 interlocked Conex boxes capable of housing 100 sea otters at a time.

"The facility is equipped to clean, dry and provide veterinary assistance to the sea otters," Alyeska said in a press release.

The sea otter center was mandated the U.S. Government under OPA 90, the Oil Pollution Act of 1990, in the wake of the 1989 Exxon Valdez oil spill.

Sea otters died in large numbers—up to 1,000 by

some estimates—in the spill despite rescue efforts by veterinarians and a paid staff which hastily erected a rehabilitation center in the gymnasium at Prince William Community College.

More than 250 sea otters were rushed to the college center in the aftermath of the spill. They were washed down with soap, enclosed in pens with fresh sea water and fed

crab, shrimp and fresh fish.

Despite Herculean efforts, most of the animals died at the center, many from oiled livers when the sea otters preened their fur and ingested oil.

Fifty or more of them animals appeared to recover sufficiently to be released back into the wilds, their fate unknown.

See Rescue... Page 5

Continued from Page 1

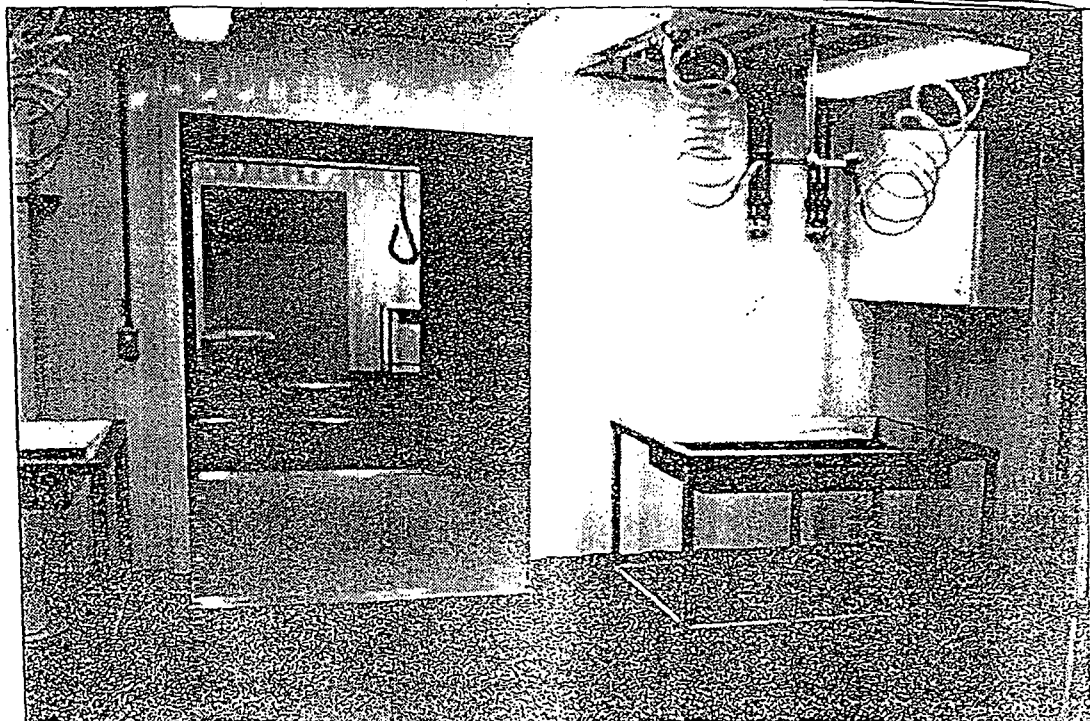
"It was a new experience for all of us," said Dan Murphy, one of the workers at the sea otter center.

It also proved to be a costly enterprise. The Exxon Corporation which footed the bill estimated the cost of treating the sea otters at \$80,000 each.

A bird treatment center, staffed by volunteers, was organized at one of the college dorms.

Instead of creating a bird treatment center in Valdez, Alyeska has contracted with International Wildlife Research to provide bird care at a wildlife treatment center in Anchorage.

January 10, 1996 Valdez Star Page 5



The New \$780,000 Sea Otter Rehab Center At The Alyeska Terminal

Alyeska photo

The year in review

March

Eyak Corp. and EVOSTC still in timber tussle

More than 14,800 acres in the Orca Narrows still sit in limbo early Wednesday, as the Eyak Corporation and the Exxon Valdez Oil Spill Trustee Council (EVOSTC) stand off in a stalemate over a decision effecting the timber rights of the forested areas.

The current moratorium in place prohibiting logging on those lands expired March 1.

Luke Borer, representing the Eyak Corporation, said the Eyak Corporation is scheduled to begin logging those lands March 2.

"It's what we've been saying for a year now," Borer said. "We're not saying anything different than what we've been saying all along."

EVOSTC offered the Eyak

Corp. \$4.13 million in exchange for a seven-year commercial logging moratorium on 14,800 acres in the Orca Narrows to protect those lands while negotiations for a more permanent arrangement continue.

Potential logging land still causes silent struggle

Land in the Orca Narrows, 14,800 acres off of Cordova, sit in quiet limbo early Wednesday, as the Eyak Corporation and the Exxon Valdez Oil Spill Trustee Council (EVOSTC) stand off in stalemate over a decision effecting the timber rights of the forested areas.

The Trustees and representatives from the Eyak Board of Directors met in Anchorage Tuesday and Wednesday, working to hammer out a deal, according to Rick Steiner, of the Cordova Marine Advisory Program (MAP).

"The word 'deal' is used in very loose terms here," Steiner said Wednesday. "The way it was explained to me, Eyak is still going to be logging. The Eyaks and the Trustees are trading out two sections in the Orca Revised Parcel for logging."

Areas along the Rude River and east of Simpson Bay are slated for logging sometime next week.

June

Indigo Girls perform in Cordova

In an effort to restore the faith of mankind in nature and themselves, the Indigo Girls — Amy Ray and Emily Saliers, along with Native American speaker Winona LaDuke, arrived in Cordova to present a special "Honor the Earth" tour and performance.

The Indigo Girls and LaDuke presented their concert in support of the Eyak Rain Forest, currently under threat of logging and extraction by local Native Corporations. The women's arrival coincided with that of a special meeting of the Exxon Valdez Oil Spill Trustees Council in our fishing community, where a dozen or more people of various beliefs and feelings testified before the council, in an attempt to save the land from logging.

Logging continues in Orca Narrows

With negotiations over land in Simpson Bay and Orca Narrows at an impasse, trees have been falling down right and left in the wake of indecision by the Exxon Valdez Oil Spill Trustee Council (EVOSTC) and the Eyak Corp.

EVOSTC expressed disappointment at the inability to work out details of a timber exchange between the council and the Eyak Corporation on Native lands near Cordova in Prince William Sound.

"Attempts to come to an agreement on the exchange haven't been successful to date. The council continues to be willing to work with Eyak to explore other opportunities to protect the lands near Cordova as well as other Eyak lands important for the restoration of injured resources and services," Mol McCammon, EVOSTC executive director, said. "We believe this can be done while addressing Eyak interests in economic development."

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Oil Spill
Public Info. Center
645 G Street
Anchorage, AK 99501

Kodiak Daily Mirror

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TUESDAY, JANUARY 16, 1996

KODIAK, ALASKA

12 PAGES

50 CENTS

Killer whale decline continues in PWS

ANCHORAGE (AP) — Seven years after the Exxon Valdez oil spill, scientists have discovered that a killer whale pod in Prince William Sound still is losing members.

"We don't know what is involved yet," said Robert Spies, chief scientist for the Exxon Valdez Oil Spill Trustee Council.

Scientists suspect that oil toxicity is not to blame. Instead, they think the problem is related to a breakdown in the pod's social structure caused by the 1989 spill, said Craig Matkin, a Homer-based marine biologist who has been studying the pod since the early 1980s.

The pod lost 13 of its 36 members immediately after the spill. Since 1993, the pod has lost another five whales and has gained only one.

The killer whale study, seabird studies, salmon and herring studies and dozens of others will be discussed during a three-day workshop that gets under way today in Anchorage. The workshop brings more than 200 scientists and resource managers together to discuss findings from the \$19.2 million worth of studies conducted in 1995 and funded by the Trustee Council.

"We've found in previous years a major benefit of the workshop was the opportunity

for researchers working in different fields to talk to one another," said Molly McCammon, the Trustee Council's executive director. "The data one person has collected can often turn out to be useful to someone working on a different problem."

Exxon officials had no comment on the studies being conducted with the \$900 million the oil company paid to settle state and federal government claims for damage. Since the 1991 settlement, the Trustee Council has allocated roughly \$80 million of that \$900 million for studying the effects of the spill.

Research has found some recovering species.

Murres, seabirds that suffered the highest mortality during the spill, "are now producing within normal bounds," Spies said.

But most scientists are still looking at problems.

Oil can still be found in some of the spill area, which stretches from the center of Prince William Sound to beyond Kodiak Island.

"We know a lot of problem areas are the northwest-facing bays," Spies said. "It's in small proportions, but you can turn over cobble or mussel beds and they can be heavily oiled." He said he didn't think the oil posed a toxic threat.

Sound oil spill research raises new questions

Decline in some species defies easy explanations

By NATALIE PHILLIPS
Daily News reporter

Seven years after the Exxon Valdez oil spill, scientists have discovered that a well-studied killer whale pod in Prince William Sound still is losing members.

"We don't know what is involved yet," said Robert Spies, chief scientist for the Exxon Valdez Oil Spill Trustee Council.

Scientists suspect that oil toxicity is not to blame. Instead, they think the problem is related to a breakdown in the pod's social structure caused by the 1989 spill, said Craig Matkin, a Homer-based marine biologist who has been studying the pod since the early 1980s.

The pod lost 13 of its 36 members immediately after the spill. Since 1993, the pod has lost another five whales and has gained only one.

Of the five recent deaths, two were calves orphaned at the time of the spill; one was a mature male whose fin collapsed seven years ago; one was a female that lost most of her close relatives seven years ago; and the final one was a calf less than a year old, Matkin said.

SOUND: Wildlife changes puzzling

Continued from Page B-1

The killer whale study, seabird studies, salmon and herring studies and dozens of others will be discussed during a three-day workshop that starts today at the Hotel Captain Cook. The workshop will bring more than 200 scientists and resource managers together to discuss findings from the \$19.2 million worth of studies conducted in 1995 and funded by the trustee council.

"We've found in previous years a major benefit of the workshop was the opportunity for researchers working in different fields to talk to one another," said Molly McCammon, the trustee council's executive director. "There aren't many opportunities to do this and the data one person has collected can often turn out to be useful to someone working on a different problem."

Exxon officials said they had no comment about the studies being conducted with the \$900 million the oil company paid to settle state and federal government claims for damage. Since the 1991 settlement, the trustee council has allocated roughly \$80 million of that \$900 million for studying the effects of the spill.

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Oil can still be found in some of the spill area, which stretches from the center of Prince William Sound to beyond Kodiak Island.

"We know a lot of problem areas are the northwest-facing bays," Spies said. "It's in small proportions, but you can turn over cobble or mussel beds and they can be heavily oiled."

Spies said about 50 mussel beds are still contaminated, most near the heart of the spill, at Knight Island in Prince William Sound. The beds trapped and preserved the oil. In 1993, workers peeled back a number of mussel beds and removed oil.

Harbor seals, with numbers dropping before the spill, still are declining about 6 percent every year, Spies said. About 300 of the Sound's 2,000 harbor seals were lost the year of the spill.

"Nobody knows why," he said. "It doesn't appear that there is disease." Instead, harbor seals are not surviving past the juvenile state.

And the number of sea otters in the Knight Island area is still depressed, Spies said.

Much of the study money for 1995 was spent on ecosystem studies, Spies said. Data from as far back as the 1970s is being examined in an effort "to figure out how things work," he said, "and under what conditions."

METRO

ANCHORAGE DAILY NEWS

WEDNESDAY, January 17, 1996

Whale study proves Slope elders right

Borough biologists teach feds an expensive lesson

By NATALIE PHILLIPS
Daily News reporter

In the late 1970s, federal biologists thought there were fewer than 2,000 bowhead whales off Alaska's north coast and that those whales traveled only close to shore because they were afraid of ice.

Eskimo whaling captains told them they were wrong.

The whaling captains "said (bowheads) are not afraid of ice, you are," said Thomas Albert, chief scientist for the North Slope Borough Department of Wildlife Management.

An elder whaling captain, Harry Brower Sr., told local biologists there were many more whales than the federal biologists were reporting; that bowheads travel in a band that stretches 10 miles out from the coast; that unlike grey whales, bowheads can break the ice for air; that bowheads are greatly affected by noise; and that some bowhead whales migrate to Russia.

Borough biologists set out to see who was right.

"We designed a research program around the six things they kept telling us," Albert told more than 200 biologists and resource managers attending a three-day conference at the Hotel Captain Cook. Participants are discussing findings from ongoing studies paid for with settlement money from the 1989 Exxon Valdez oil spill.

Both Albert and Larry Merculieff, general manager of the Central Bering Sea Fisherman's Association, were keynote speakers at the conference. Their message to scientists: Don't ignore local knowledge in your scientific pursuits.

"Harry Brower Sr. very patiently told us for years you must go out on the ice," Albert said. On the ice, they found the cracks that the bowhead makes to get air. "Conventional whale biologists couldn't grasp this," he added.

The borough spent 15 years and millions of dollars proving what Brower and other whaling captains already knew to be true.

Typically, scientists view local knowledge as "anecdotal," Merculieff said. But "we have our own validation system," the St. Paul Island Aleut said. "There is an informal process where consensus is reached. It becomes part of a discussion until everyone agrees on something."

Merculieff suggested biologists consult intermediaries — people experienced in both the world of science and the local customs.

Albert defined local knowledge as "information about the natural world derived from generations of observations by people who may be killed if they don't act on it or act wrong," Albert said. "It makes it truthful."

Over time, he said, the information becomes very precise.

"Transfer this knowledge," Albert said. "Do not ignore the people who already live there."

PENINSULA CLARION

WEDNESDAY, JANUARY 17, 1996 Soldotna/Kenai, Alaska

New research supports sockeye escapement theory

By TONY LEWIS
Peninsula Clarion

Scientists studying sockeye salmon in the Kenai River have made a "fairly major breakthrough" that they say explains the boom and bust cycle of the river's prized fish.

The findings back up a long-held belief that allowing large numbers of sockeye to return to their river spawning beds causes a temporary decline in future runs — a phenomenon known as overescapement.

If the results hold up under scientific scrutiny, the study could have a significant impact on future management of Kenai River reds.

Keeping with the so-called overescapement theory, biologists now try to limit the number of sockeye that enter the river in July to between 450,000 and 700,000 fish. The run size averages about 2.5 million fish, but in the past 25 years has varied from less than 1 million to almost 10 million.

The extra fish are harvested by Cook Inlet setnetters and gillnetters. But with the recent explosion of sport fishing on the Kenai, bank anglers are demanding more fish be allowed into the river where they can be caught on hook and line.

Sport fishers have criticized the

overescapement theory in the past, claiming it's a ploy used by commercial fishers to boost their harvests by keeping sockeye out of the river.

Dana Schmidt, head of the Alaska Department of Fish and Game's limnology lab in Soldotna, said this latest study has nothing to do with the politics of how fish are divided among fishers. It simply explains the natural population dynamics of sockeye salmon in the Kenai River, something that's never been done accurately before.

"From a scientific perspective, this is a fairly major breakthrough," Schmidt said. "It's the first time we've had a model that fairly accurately predicts sockeye production in a glacial system."

Scientists studying sockeye in clear-water rivers have had a grasp on the reason for the ups and downs of the salmon for years now. But the Kenai River, whose glacier-fed waters are icy cold and cloudy with silt, have not fit those models.

The missing link, Schmidt said, are the miniature, shrimp-like plankton that live in Skilak Lake and are the main food source for juvenile sockeye.

Scientists have long thought that

See SALMON, back page

...Salmon

Continued from page 1

the plankton supply was the key to unlocking the mystery behind the Kenai's fluctuating red runs.

Up until now, though, the fish have had them fooled.

Kenai River sockeye run on a five-year life cycle, spending two years in fresh water and three years in the salt water before returning to spawn.

Biologists expected the booms and busts of the fish to follow the same five-year pattern. They theorized that the high number of offspring from large returns would overgraze the food supply in Skilak Lake, causing many to die of starvation before entering the ocean.

At first, evidence supported this theory. But biologists trying to predict the number of sockeye that would return to spawn found their numbers were off. Not by a lot, but enough to suggest there was a glitch in the model. Enough to create doubts in some that overescapement was a misguided theory.

So Schmidt and other Kenai River fisheries biologists went back to the data.

What they found is that large runs have the biggest impact not on their own offspring, but on the offspring of the following year's spawners.

Essentially what happens is that the smolt from the large run eat most of the plankton in the lake, leaving little food for the next year's juvenile fish during the critical spring months after they hatch.

"The net result is you're going to start a cycle," Schmidt said. "You get a huge oscillation of run returns."

Schmidt plugged the data into the computers and to his delight found the new model almost perfectly predicts the strength of Kenai River sockeye returns.

Schmidt and Fish and Game Biologist Ken Tarbox, who helped in the study, emphasize that Kenai River sockeye runs are healthy and in no danger of immediate decline.

The booms and busts are natural, they said, and the sockeye will continue to come back to the river whether or not biologists limit the number of spawning fish allowed into the river.

Deciding how many fish to allow into the river is a social problem, not a biological one, they said. If Alaskans want to maintain steady runs year after year and maximize yield, biologists will have to manage the sockeye and limit the number of spawners.

If Alaskans want to see Kenai River runs thrive one year and crash another, biologists can take a hands-off approach to managing the river.

"There's nothing wrong with either objective if that's what society wants," Tarbox said. "Ultimately this thing defines how natural systems work."

This latest information on overescapement will not be presented to the Alaska Board of Fish meeting in February when it takes up the issue of allocating Kenai River sockeye. Schmidt said he wants more of his peers to review the work before it's used to make policy decisions.

Schmidt and Tarbox are scheduled to present their findings at a conference today at a conference in Anchorage for scientists studying impacts from the 1989 Exxon Valdez oil spill. The scientists' work was funded by the Exxon Valdez Oil Spill Trustee Council.

In the summer after the spill, commercial fishers were temporarily prohibited from fishing out of fear that oil in the inlet might taint the sockeye. Nearly 1.6 million fish escaped into the river that year.

The two Fish and Game scientists hope their latest information doesn't fuel the fire of the allocation fight now waged between commercial and sport fishers. Less attention needs to be devoted to dividing up fish and more needs to be focused on protecting habitat on the Kenai,

they believe.

Sockeye will rebound from small runs, but they won't come back if the environment they depend on for food and shelter is destroyed. The decline of salmon stocks in the Pacific Northwest proves that, they say.

"If all the energy that's put into allocation battles was put into maintaining habitat, we'd all be better off," Tarbox said.

Thursday, January 18, 1996

Letters

FROM PREVIOUS PAGE

Delusional

Dear Editor,

Purely flabbergasting it was for our hifalutin' Speaker of the House in one sure-fired breath to characterize Alaska State Trooper Rose Edgren an outsider, deigning not to allow Edgren the floor to receive a medal of heroism during the governor's State of the State address, primly stating, "Charles Lindbergh was the last outsider ever to come on the House floor."

For crying out loud! Such starchy protocol might well be appreciated in Great Britain's House of Windsor, but here in our State House not to recognize someone with the esteem of Trooper Edgren, who, responding to a domestic violence disturbance, wound up prevailing in an ensuing shoot-out, resulting in not only protecting the life of her fellow trooper but, in fact, saving the life of the culprit she had to shoot by administering him crucial first aid, makes one wonder if our Speaker hasn't become a bit delusional, suffering from somewhat of a swollen head.

To dispel any further pretensions to grandeur, it's not as if the Speaker's comportment of herself has been particularly becoming, much less elevating to the House chambers, with three ethics violations racked up against her in the space of a year.

Under the circumstances it seems the House Republican majority has been more than liberal in their toleration of Phillips as Speaker of the House.

Certainly someone of such sterling stature as Trooper Rose Edgren should have been allowed to grace the House floor. It would have been a breath of fresh air: a genuine article of moral authority.

Tim O'Leary

Last chance

Dear Editor,

An important meeting of the Exxon Valdez Oil Spill Trustee Council is scheduled for Jan. 30. This could very well be the last opportunity to secure the destiny of the

most beautiful places in the world from imminent development.

Historically, the property has many times come close to being acquired for use as a state park, fulfilling the wishes of many. Currently, plans for the Baycrest property are still underway for development of a world-class recreational subdivision, complete with boat launch facilities, private beach access and an awesome view of Kachemak Bay, unless a reasonable offer to purchase is made.

Anyone with an interest in seeing the Baycrest and Overlook Park parcels preserved for future generations should contact the Exxon Valdez Oil Spill Trustee Council in support of its purchase prior to the Jan. 30 council meeting. Write the Council at: 645 G St., Suite 401, Anchorage, AK 99501.

Rick G. Kamitchis
Anchorage

Blessed community

Dear Editor,

We on the board of Share the Spirit would like to thank the individuals and organizations that helped with this year's Christmas program.

We also did most of our shopping with local merchants. We believe in shopping locally.

Our local Brownie and Girl Scout Troops were responsible for the lovely angel tree decorations.

Helping Hands of Anchor Point helped with many toys. The Friendship Center made special gifts for Christmas tables. The school children helped with canned goods and turkeys.

The local stores helped with donations and angel trees, as did our three local banks. Most all the restaurants in town gave salads, fried rice and breads for the spaghetti feed.

Our local businessmen gave generously for door prizes and we cannot count the hours given for volunteer time.

Local organizations were also there to give support. We had help from Beta, Pioneers of Alaska, American Legion and the Auxiliary, Kachemak Bay Lions, Homer Elks and Emblem Club, Food Pantry and the Mormon Church.

A very special thanks to the folks and their patrons at the Waterfront. They do very special things for us all year long.

Many thanks to the big food distributors who give to

our cause every year. We know you help others all year long and we are very appreciative.

Lastly I want to thank and acknowledge the help this community receives from Elizabeth and Pat Parmley and the crew in the Grog Shop. We are blessed to have such giving people in our community.

Thank you to each and every person who gave and still continues to drop coins in our jars around town. You are blessed.

Norma J. Foust, Board Member
Share the Spirit

Another great year

Dear Editor,

We at Share the Spirit would like to give an accounting for the past year's activities. Through this community's generosity, we were able to help 54 families throughout the year and distribute 128 Christmas baskets for 1995.

This help amounted to approximately \$11,000. The majority of this money was raised in the Homer area. All monies were spent with local merchants whenever possible.

We thank you for your efforts and contributions in 1995 and hope that 1996 is an even better year.

Please take a moment to look for the Share the Spirit display ad in this issue. These businesses and groups deserve our patronage. We hope that you think to shop locally and when you do, think of these folks.

Share the spirit,

Shari Daugherty, Secretary
Share the Spirit

Kindness appreciated

Dear Editor,

This is to the folks at Homer Cablevision: As a new year comes around once again and we reflect on the events and the people who have supported us this past year, we would like to take a few moments to say thank you.

Your generosity goes beyond words and the pleasure received from your kindness is appreciated daily.

Thank you, from all of us at Detente Homer.

Anita Stahl

Let the healing begin

Talking Circles focus on Native, community issues

Times staff

The Native Village of Eyak, Sound Alternatives, the Family Resource Center and the University of South Alabama will be holding a two-day workshop aimed at healing the grief and loss of Native people affected by the Exxon Valdez oil spill.

This workshop is funded by the Prince William Sound Regional Citizens' Advisory Council, as part of the "Growing Together" community education program. Additional support for this event will be provided by the Alaska Native Health Board, Trampling Tobacco Project and the Reluctant

Fisherman Inn.

The workshop will consist of talking circles and healing circles led by the facilitators "Cookie" Elizabeth Rose, a noted Native American speaker, and Lydia Robart from Port Graham, who will work primarily with women. Thomas Farquhar, from the South-central Foundation, will work primarily with men. Dolly Carter from Chugachmiut will also assist in the workshop.

Sam Lamabull and Joseph DeMatteo from the Alaska Council on Prevention of Alcohol and Drug Abuse will also attend the circles. Lamabull, spiritual leader, will assist in the drum ceremonies and

healing ceremonies. The Northern Light Drum Group will provide drumming for the ceremonies.

The workshop will be held at the Masonic Temple in Cordova for two days, Jan. 27 and 28, from 9 a.m. to 5 p.m. Lunch will be provided for all participants on both days. This will be a tobacco-free event and information about tobacco will be available.

There is no charge for this workshop. All Native people and those who respect Native culture and traditions are encouraged to take advantage of this opportunity to gather together and promote healing among themselves and their community.

METRO

ANCHORAGE DAILY NEWS

FRIDAY, January 19, 1996

Reds theory details busts

Big spawning runs deplete lake plankton, study says

The Associated Press

KENAI — Preliminary results from a red salmon study back up long-held beliefs that permitting large numbers of fish to return to river spawning beds will cause a temporary decline in future runs.

Scientists undertaking the Kenai River study say it's a "fairly major breakthrough" that helps explain the boom-and-bust cycle of the river's prized fish.

If the overescapement study withstands scientific scrutiny, it could significantly affect management of Kenai River reds.

Currently, fisheries managers limit the number of reds entering the river in July to between 450,000 and 700,000 fish. The run size averages 2.5 million fish, but in

Please see Page B-3, **REDS**

REDS: Big runs deplete food

Continued from Page B-1

the past 25 years has varied from less than 1 million to almost 10 million.

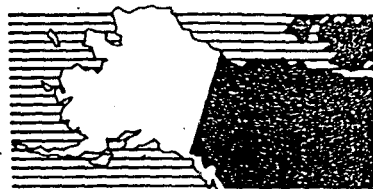
Extra fish are harvested by Cook Inlet setnetters and gillnetters. But with the explosion of sportfishing on the Kenai, bank anglers are demanding more fish be allowed into the river, where they can be caught on hook and line.

Sportfishermen have criticized the overescapement theory, claiming it's used by the commercial fleet to boost harvests by keeping reds out of the river.

Dana Schmidt, head of the Alaska Department of Fish and Game's limnology lab in Soldotna, said the latest study isn't linked to the politics of fish allocation and does help explain the Kenai's red salmon population dynamics.

"This is a fairly major breakthrough," Schmidt said. "It's the first time we've had a model that fairly accurately predicts sockeye production in a glacial system."

Schmidt and Fish and Game biologist Ken Tarbox, who helped in the study, say that Kenai River red runs are healthy and in no danger of immediate decline.



Booms and busts are natural, and experts say reds will return to the river no matter how many fish biologists permit to enter the river for spawning.

In clearwater streams, salmon population dynamics have been understood for years. But the Kenai, a glacier-fed river of icy cold, silty water, doesn't fit clearwater models.

Schmidt said the missing link turned out to be the shrimplike plankton that live in Skilak Lake and are the main food source for juvenile reds.

The new study shows that large runs have the biggest effect not on their own offspring, but on the offspring of the following year's spawners.

Smolt from the large run eat most of the lake plankton, leaving little for the next year's juvenile fish during the critical spring months after they hatch.

"The net result is you're going to start a cycle," Schmidt said. "You get huge oscillation of run returns."

Killer whales still dying off

By Natalie Phillips

Anchorage Daily News

Seven years after the Exxon Valdez oil spill, scientists have discovered that a well-studied killer whale pod in Prince William Sound still is losing members.

"We don't know what is involved yet," said Robert Spies, chief scientist for the Exxon Valdez Oil Spill Trustee Council.

Scientists suspect that oil toxicity is not to blame. Instead, they think the problem is related to a breakdown in the pod's social structure caused by the 1989 spill, said Craig Matkin, a Homer-based marine biologist who has been studying the pod since the early 1980s.

The pod lost 13 of its 36 members immediately after the spill. Since 1993, the pod has lost another five whales and has gained only one.

Of the five recent deaths, two were calves orphaned at the time of the spill; one was a mature male whose fin collapsed seven years ago; one was a female that lost most of her close relatives seven years ago; and the final one was a calf less than a year old, Matkin said.

The killer whale study, seabird studies, salmon and herring studies and dozens of others were discussed during a three-day workshop in Anchorage last week. More than 200 scientists and resource managers gathered to discuss findings from the \$19.2 million worth of studies conducted in 1995 and funded by the trustee council.

"We've found in previous years a major benefit of the workshop was the opportunity for researchers working in different fields to talk to one another," said Molly McCammon, the trustee council's executive director. "There aren't many opportunities to do this and the data one person has collected can often turn out to be useful to someone working on a different problem."

Valdez Vanguard

1-24-96

Exxon officials said they had no comment about the studies being conducted with the \$900 million the oil company paid to settle state and federal government claims for damage. Since the 1991 settlement, the trustee council has allocated roughly \$80 million of that \$900 million for studying the effects of the spill.

Research has found some recovering species.

Murres, seabirds that suffered the highest mortality during the spill, "are now producing within normal bounds," Spies said.

But most scientists are still looking at problems.

Oil can still be found in some of the spill area, which stretches from the center of Prince William Sound to beyond Kodiak Island.

"We know a lot of problem areas are the northwest-facing bays," Spies said. "It's in small proportions, but you can turn over cobble or mussel beds and they can be heavily oiled."

Spies said about 50 mussel beds are still contaminated, most near the heart of the spill, at Knight Island in Prince William Sound. The beds trapped and pre-

served the oil. In 1993, workers peeled back a number of mussel beds and removed oil.

Harbor seals, with numbers dropping before the spill, still are declining about 6 percent every year, Spies said. About 300 of the Sound's 2,000 harbor seals were lost the year of the spill.

"Nobody knows why," he said. "It doesn't appear that there is disease." Instead, harbor seals are

not surviving past the juvenile state.

And the number of sea otters in the Knight Island area is still depressed, Spies said.

Much of the study money for 1995 was spent on ecosystem studies, Spies said. Data from as far back as the 1970s is being examined in an effort to "figure out how things work," he said, "and under what conditions."

Seven Years After Spill, Scientists Still Seeing Effects Of Oil On Wildlife, Fish

ANCHORAGE (AP)— Seven years after the Exxon Valdez oil spill, scientists have discovered that a killer whale pod in Prince William Sound still is losing members.

"We don't know what is involved yet," said Robert Spies, chief scientist for the Exxon Valdez Oil Spill Trustee Council.

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Dying Orcas

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Still Looking

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sel beds and they can be heavily oiled." He said he didn't think the oil posed a toxic threat.

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Harbor Seals

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And the number of seals in the Knight Island area is still depressed, Spies said.

Much of the study money for 1995 was spent on ecosystem studies, Spies said. Data from as far back as the 1970s is being examined in an effort "to figure out how things work," he said, "under what conditions. What effect does climate have? How does predation work?"

☆

Anchorage Daily News
2/5/96

CORDOVA PLANS TO PUT A NEW FACE ON OLD SPIT

CORDOVA — Big changes are in store at Paradise Cove.

Also known as The Spit. And Hippy Cove.

Historically, the Spit is a tent camp and transient hangout, also inhabited by a few select locals. Under a plan initiated by the Cordova Sporting Club, Fleming Spit is getting a facelift. The project is funded by money from the Exxon Valdez Oil Spill Trustee Council.

"This project began as a glimmer in Ed (Zeine's) eye about seven or eight years ago," said Dave O'Brien, a founding member of the club. "We wanted to form a club for all people in Cordova who enjoy sporting and the outdoors. This is an important outgrowth from there."

O'Brien said the Fleming Spit enhancement project, at an estimated cost of \$400,000, is tentatively scheduled to begin

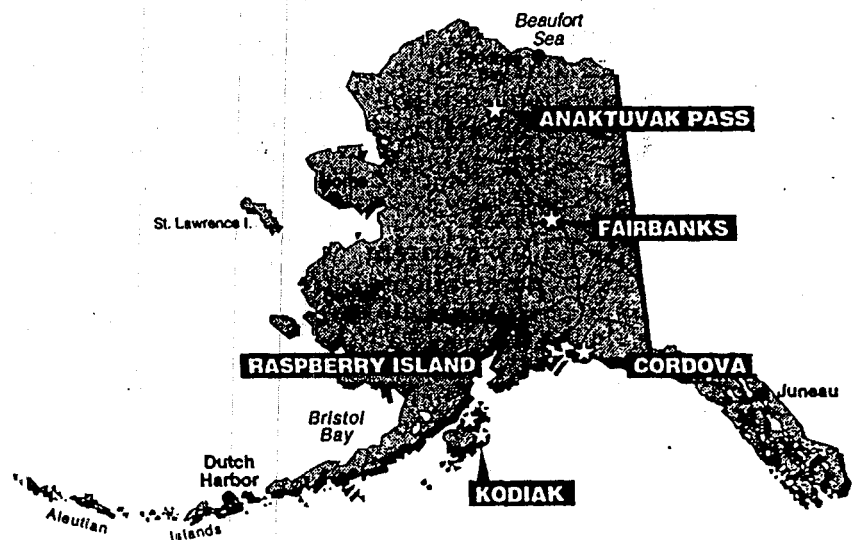
in March, if the project passes city government approval. If everything goes according to plan, the project could be finished this year.

The Spit has long been known as one of Cordova's prime silver and king salmon fishing spots. Fish returning to the area are from enhancement programs started by the state Department of Fish and Game, the Prince William Sound

Aquaculture Corp. and private individuals.

But people living on land in the Fleming Spit area don't have to worry about moving just yet. O'Brien said many of them are on private land, and until the landowners enforce evictions, the project won't cause any problems to anyone living in the area.

— Cynthia M. Stimson
Kodiak Daily Mirror



Anchorage Daily News

Books

A disaster of the first order

Marine Mammals and the Exxon Valdez. Thomas R. Loughlin, ed. Academic Press, San Diego, CA, 1994. 395 pp., illus. \$49.95 (ISBN 0-12-456160-8 cloth).

The grounding of the *Exxon Valdez* on Bligh Reef in Prince William Sound in March 1989 ranks as a disaster of the first order, the largest oil spill in US history. Eleven million gallons of North Slope crude dumped in one of the most beautiful places on Earth cannot be easily overlooked or ignored, and it was not. Nor did it take long to choose sides in what became a long-running and costly collection of activities called NRDA (for Natural Resource Damage Assessment). The sight of heavily oiled and dead sea birds and otters on the evening news, televised live from Prince William Sound, overwhelmed all human efforts to explain or contain the damage, including the public relations damage hapless oil company and bewildered government officials heaped on themselves. In the media contest between sea otters and Texas oil flaks or gray government bureaucrats, otters win every time.

Otters may have won the media contest, but some fear that scientists may have lost their innocence and science its credibility. Of one thing there is little doubt, the true winners overall are the lawyers, whose numbers are seemingly only exceeded by the black flies of summer.

Lawyers needed facts to support claim and counterclaim, and most of those facts revolved around the harm done by so much oil being dumped in such a lovely place. There was no dispute about the fact of oil in Prince William Sound—lots of the awful, stinking stuff—although assigning blame and figuring out why it got there required legal recourse and even-



tual penalty. In these pursuits, the facts required were often, if not primarily, scientific, and NRDA was a primary means to secure them.

This book assembles much of the marine mammal work done directly under NRDA. Some 40 marine mammal specialists from Alaska and elsewhere are featured in this collection, edited by Thomas R. Loughlin of the National Marine Fisheries Service's Marine Mammal Laboratory in Seattle, Washington. This book is most welcome for several reasons, not the least being its assembly in one place of perhaps the most extensive set of references on its stated topic. Nonetheless, the damage assessment went well beyond marine mammals to include monitoring, cleaning up, and mitigating activities and their consequences for terrestrial mammals, birds, fish and shellfish, and their habitats, including the entire ecosystem centered on, but not limited to, Prince William Sound. NRDA was huge, and this book concentrates on but a small part of it.

Two concise opening chapters

give adequate context to the discussion of mammals within the larger whole of the *Exxon Valdez* spill and its aftermath (up until approximately 1993). Readers wanting to know more about the legal and political institutional details are well advised to look elsewhere. The true purposes of this book are to highlight and detail marine mammals from various scientific angles. Chapters such as "Pathology of Sea Otters" (chapter 16), "Impacts on Distribution, Abundance, and Productivity of Harbor Seals" (chapter 6), and "Tissue Hydrocarbon Levels and the Number of Cetaceans Found Dead after the Spill" (chapter 20) suggest the approach and style of the book.

For the nonspecialist initially attracted by the book's compelling title the going could get rough. The conclusions reached and lessons learned could be less than edifying as well.

Sea otters died, to be sure. But how many? We know how many were captured and cleaned up: 343, approximately half of which died in captivity, and some of which died after release. Based on modeled esti-

mates, the otter loss may have been 2800 killed (p. 78), or somewhere between "3500 and 5500 otters from a total population of about 30,000 in the Prince William Sound and the Gulf of Alaska may have died as a direct result of the oil spill" (p. xiv). The numbers are not precise. A consistent rationale for basic measurement problems was the lack of adequate baseline data from the pre-spill setting—a finding resulting in a call for "rigorous survey protocols in areas shared by sea otters and oil recovery, storage, and transportation" (p. 94).

The mortality figures and the causal connections between oil and other marine mammals are even less well grounded or defined than for otters, which makes damage assessment problematic. For instance, "None of the data presented and analyzed provided conclusive evidence of an effect of the Exxon Valdez oil spill on Stellar sea lions" (p. 137). Or, with respect to the killer whale groups or pods resident in Prince William Sound: "It is not clear why six resident pods, other than AB, have increased from 86 whales in 1984 to over 100 whales in 1992" (p. 159, emphasis added). Or for humpback whales: "The results of this study do not indicate a change in abundance, calving rates, seasonal residency time of female-calf pairs, or mortality" (p. 188).

So to what does it all add up? The final chapter, by D. J. St. Aubin and J. R. Geraci (chapter 21), tries to be responsive but comes up short with solid conclusions or hard recommendations, once again, save the expected call for more research: "It is apparent from the studies presented in this volume that good baseline data yield better answers sooner—a reminder of the value of ongoing studies into fundamental biological questions" (p. 375).

Under the circumstances a key question remains: Does good baseline data exist to judge the effects of the coming Newt-ron bomb on biology and biologists?

ACID RAIN IN NORWAY

Long-Term Experiments with Acid Rain in Norwegian Forest Ecosystems. Gunnar Abrahamsen, Arne O. Stuanes, and Bjørn Tvelte, eds. Springer-Verlag, New York, 1994. 342 pp. \$79.00 (ISBN 0-387-94119-3 cloth).

Through the long public and scientific debate, mostly in the 1980s, on effects of acidic deposition, everyone seemed to be looking for the one critical experiment that would clearly support or reject hypotheses about acidic deposition and damage to forests. Even in areas of profound damage, as in the Black Forest of southwestern Germany, the presence of factors unrelated to acid, such as the high level of oxidants, left doubt as to whether reduction in acid gas emissions would relieve the damage. Millions of dollars were spent testing hypotheses by reproducing in enclosed facilities aspects of the growth and cycling of materials from a forest ecosystem. However, no one was ever sure that the results from these separate experiments were capturing the reality of a mature forest ecosystem as it functions in the field under the stress of acidic deposition.

The only serious alternative approach seemed to be to study directly what long-term changes were taking place in the field, supplemented by experimental human manipulation of acid inputs. The Norwegian Ministry of the Environment, the Agricultural Research Council of Norway, and the Norwegian Forest Research Institute undertook such a study in the late 1970s and early 1980s. Norway had been a leader in comprehensive, interdisciplinary studies of acid rain effects on aquatic ecosystems and adjacent forest uplands during the 1970s. This work led to other large-scale forest surveys and multiple small-plot or watershed studies of acid-base relationships in forest soils starting in the late 1970s. Some of these experiments used acid additions by spray watering, mostly between 1972 and 1978 (with a few extending until 1983). When relatively large-scale damage became

evident in mid- to high-elevation spruce forests in Germany during 1983, the Norwegian government approved increased funding for subsequent monitoring of these experiments and coordinated detailed process research at many sites.

The book *Long-Term Experiments with Acid Rain in Norwegian Forest Ecosystems*, edited by Gunnar Abrahamsen, Arne O. Stuanes, and Bjørn Tvelte, is a summary of the results up through 1988. As such, it may come as close to being a report on the ideal so-called critical field experiment as is possible.

One strength of the book is the systematic design by which large-scale field experiments were carried out, monitored, and reported. The only comparable study that comes to mind is the watershed manipulation done as part of the Hubbard Brook study in New Hampshire. The latter was more focused, because it was one site, and simpler, because there was not an ongoing manipulation of all the sites as there is when field studies of the effects of acidic deposition are undertaken. Thus, considering the need to investigate multiple types of forest/soil systems and the changes already taking place (ameliorated on some plots by lime treatments), this book is important for the experimental approach as well as for the results.

Perhaps the most conclusive findings are in a 64-page chapter on soil chemistry. Here, extensive survey charts show the gradual decline in soil pH, base saturation, and exchangeable calcium and magnesium in the B horizon layer of most of the acid application experiments. However, trends were not consistent for cation exchange capacity. Interestingly, however, the results show that the acid additions increased (and lime additions decreased) the organic matter in the surface soil horizon, thereby changing cation exchange capacity inversely to what is commonly expected following acid treatments. No discussion is offered in the text as to the importance of the so-called consistency in what is judged to be an inconsistent result.

The chapters that follow focus on soil biology (plant and animals), with interesting results on the effect of the treatment water pH on the

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~C--12-11/29/96
Oil Spill
Public Info. Center
645 G Street
Anchorage AK 99501

Kodiak Daily Mirror

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FRIDAY, FEBRUARY 9, 1996

KODIAK, ALASKA

36 PAGES

50 CENTS

Community gets look at oil spill protection plans

By SUE JEFFREY
Mirror Writer

Nearly seven years after the Exxon Valdez Oil Spill dumped 11 million gallons of Alaskan crude in Prince William Sound, plans to protect Kodiak Island from future spill disasters are still in the works.

The first draft of the Sensitive Areas Index, which is part of the Kodiak Area/Regional Contingency Plan, was released in October and is now ready for public comments.

A meeting Tuesday, Feb. 13 will be the first opportunity for the community to learn about the details of the plan. Not only is it a chance to comment on the document, it also is a time to suggest to the Sensitive Areas Work Group how the plan could better serve Kodiak Island.

"We are at the beginning stages of this process," said Kristin Stahl-Johnson, who has been active in the oil spill plan process since 1989. "We need to make this our plan, one that is responsive to our needs."

The Sensitive Areas Work Group, which consists of 20 agency representatives from the U.S. Dept. of Interior and the Alaska Dept. of Fish and Game, is

ranking areas in the Kodiak region.

The Work Group is ranking areas by a method similar to the process the Exxon Valdez Trustee Council used to assess land parcels for acquisition. It rates the sensitivity of specific areas based on biological values, human use and geomorphology, or types of land formations.

Kodiak residents make comments to agency representatives on the process or suggest areas they think are especially important to protect at Tuesday's community information meeting.

"It is important—critical to the success of the cleanup plans—for local residents to give their input in the planning process," says.

"Two lessons we learned from the oil spill are one, adequate contingency plans must be in place for quick and effective oil spill cleanup response and two, the plans must include local knowledge from local residents to make them effective," Stahl-Johnson said.

The Sensitive Areas Work Group community information meeting will begin at 7 p.m. in the borough assembly chambers. For more information, call Stahl-Johnson at 486-4684 or Linda Freed at 486-9360.

Lots of smoke: Lit

By MARK
BUCKLEY
Mirror Writer

A cannery row fire yesterday afternoon burned stored fishmeal and blanketed downtown Kodiak with pungent, acid smoke. Fortunately, the fire caused little damage, a cannery official says. Yesterday at 2:34 p.m., a 911 caller from International Seafoods of Alaska's Pacific Pearl plant reported a fire on the plant's second floor.

The plant is located at 517 Shelikof Street.

The fire is believed to have started after a fishmeal drying unit overheated and ignited fishmeal in an adjacent hopper.

"The flame dryer gets the fishmeal up to 850 degrees," said Kodiak fire chief Mike Dolph. "At temperatures hotter than that, the dryer is supposed to shut down. Yesterday, for some reason, the safety mechanism didn't work and the dryer overheated."



David Rogers, International Seafoods manager, speaks with fire department officials on Shelikof Street. A fire blanketed downtown Kodiak Wednesday afternoon.

David Rogers, the plant's general manager, said stank and timely response and good fighting kept damage to a minimum.

"No one was hurt, and there was minimal damage," Rogers said.

"The hopper was steel, and it contained pretty well. Our guys were able to keep things contained until the fire department arrived."

Cardboard clogs recycling

Question of the Week

What do you think of a local landowner's plan to turn an 11.5-acre parcel of the Valdez Duck Flats into an RV park and boat repair shop?



"I think it's wrong. First of all, if you look at the Environmental Protection Act, you can't do that. And if he does get past the law, others would follow and build more and pretty soon there would be nothing left."

Pat Olson

"I think we need another RV park. And I don't think it will have an (environmental) impact where he plans to build it. But that's a lay opinion on my part."

Eric Nielsen



"I'd like to keep the Valdez Duck Flats preserved. If he can build it without encroaching the flats, I have no problem."

Jackie Robb



"I'm against it. I think a lot of people come to Valdez because it's a beautiful area. And the duck flats add to that. More construction there would be detrimental to the area, and to the ducks."

Donna Lano



Valdez Vanguard 2/7/90

Valdez Vanguard

11-29-93

Trustees want piece of duck flats

The Exxon Valdez Oil Spill Trustee Council said its ready to pay \$150,000 to protect from development a 10-acre parcel of the Valdez Duck Flats currently owned by resident Philip Hayward.

The proposal is part of a 30,000-acre, \$10.8 million private-land protection program authorized Nov. 20 by the Trustees. The chosen land — mostly river and ocean shoreline in or near spill-affected areas — stretches from Valdez to Kodiak. Five of the 16 parcels are located along the Kenai River. An offer of \$310,000 was also made to buy 22 acres near Tatitlek.

Hayward said last week he hadn't yet seen the offer in writing but assumed he'd find it acceptable. His land lies along the northeastern edge of the duck flats near the intersection of Mineral Creek Loop Road and the Richardson Highway. If sold to the Trustees, it would be jointly managed by the state Departments of Fish & Game and Natural Resources.

Developer Throws In The Towel

CITY HALL—Growing weary of wrestling with various federal and state bureaucracies for the past two years, local developer Chuck Dennis is throwing in the towel.

Dennis told the Valdez city council Monday night he's willing to sell his 4.3 acres along the Richardson Highway and Chitna Drive.

"I'm willing, I don't really

want to, but I'm willing to get off the property if we can find it reasonable to do so," Dennis told the council.

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Developer Abandons Duck Flats Project

Continued from Page 1

He asked the city council to endorse a request to the Exxon Valdez Oil Spill trustee council to acquire his land.

The suggestion originated with Nancy Lethcoe, the operator of a Prince William Sound recreational cruise business.

She is adamantly opposed to any development on the Dennis property, saying it would be detrimental to the natural integrity of the Duck Flats.

She asked the city council to adopt a resolution in support of using Exxon Valdez Oil Spill funds to acquire the property.

For the past two years, Ms. Lethcoe has been bedeviling Dennis by writing to various federal and state agencies in opposition to his project.

Dennis' original plan was to acquire another 29 acres from the University of Alaska, giving him all the land

stretching from the Small Boat Harbor along Chitna drive to the Valdez Animal Shelter.

His plan was to build a boat dealership and an RV park on the property.

In the course of applying for various permits, Dennis has won support of the U.S. Army Corps of Engineers and the U.S. Fish & Wildlife Service.

But the state Department of Fish & Game, the Department of Environmental Conservation and the Department of Natural Resources have been opposed.

In an effort to break the bureaucratic logjam, Dennis offered to dedicate 16 acres of the property—the land

adjacent to the Duck Flats—to habitat uses.

Additionally, he pledged to build a 900-foot boardwalk along the edge of the property for public viewing of wildlife.

Those concessions failed to persuade either Ms. Lethcoe or the state agencies.

Dennis estimates he's spent \$60,000 so far on travel, permits, surveyors and engineering.

He's grown frustrated at dealing with the public agencies.

"They know how to work against big oil and big business but they don't know to deal with small business. They treat us just the same way," Dennis told The Star.

The Valdez Star

2/14/94

Anchorage Daily News 2/12/96

MARINE HYMNS: Sylvia Earle, Ph.D. — marine biologist, ocean advocate, former chief scientist of the National Oceanographic and Atmospheric Administration, author and director of a company that builds submersibles — sang the praises of the seas Thursday. The reception at the Anchorage Museum of History and Art was hosted by the **Alaska SeaLife Center** in Seward. When completed, the center will combine research with wildlife rehabilitation and public education.

Earle has been up here before to study humpback whales, to see the Exxon Valdez spill, to confer with whaling captains. "I have this long-term love affair with Alaska that shows signs of being permanent," she said before her talk.

In these times of change and threats to the environment, she feels the SeaLife Center could be a major beneficial force.

"The biggest threat to our future," she said, "is ignorance."

For Stevens, a prize Senate slot beckons

One more election stands in way of lawmaker

By DAVID WHITNEY
Daily News reporter

WASHINGTON — Sitting prominently on the corner of Alaska Sen. Ted Stevens' desk is a cream-colored paperweight emblazoned with what he proudly proclaims to be his motto.

"If you're not the lead dog," it reads, "the view never changes."

If everything goes well for Stevens this year — if he's re-elected and Republicans keep control of the Senate — the 72-year-old lawmaker finally will be the lead dog.

After a quarter century of important but less visible work on the Senate Appropriations Committee, Stevens is in line to become chairman next year.

"Time passes, it seems, slowly," Stevens said in an interview. "But all of a sudden ... I can't hardly realize that I really



Stevens

am going to be chairman."

There is no more powerful committee in the U.S. Senate than the appropriations committee.

The committee's job is to divvy up money that has been

budgeted for all branches and agencies of the federal government. As chairman, with the ability to steer money toward his own special interests, Stevens will be an economic powerhouse in Alaska.

"On a scale of one to 10, being appropriations committee chairman is a 10," said Lloyd Meeds, a senior partner and Washington, D.C., lobbyist for the Pacific Northwest's Preston, Gates

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law firm.

"I think that it is as equally high as being Senate majority leader," Meeds said. "In terms of importance to a constituency, it is probably more important than majority leader because the appropriations committee chairman can still deal effectively with his state's issues."

To become chairman, Stevens must get re-elected. And for the first time in two decades, he faces stiff primary competition from a Republican conservative who considers the more moderate Stevens a wasteful big spender.

In announcing his candidacy last month, former Anchorage banker David Cuddy said the mood of the country is sweeping the big spenders out of office. He dismissed Stevens' rising power, saying Senate freshmen next year may demote the appropriations panel into a weak offshoot of the budget committee.

Stevens dismissed Cuddy's prediction as uninformed. If anything, he said, the budget committee eventually could become a subunit of the appropriations panel.

Still, Stevens' work channeling money to Alaska is certain to be a feature in the August primary race. Stevens, who will campaign heavily on his escalating power, insists that calling him a big spender is nonsense.

It's the budget process that determines how much money will be spent, he said. His committee merely spends what Congress authorizes and the chairman is positioned to make sure his state gets its cut.

Stevens' predecessors have used their positions to alter the economic landscape of their states.

The current chairman, Sen. Mark Hatfield, whose retirement clears the way for Stevens' ascension, has poured billions of dollars over the years into Oregon to revitalize downtown Portland and move the Oregon Health Sciences Center from obscurity to national prominence.

I would not say that my being chairman (of the Senate Appropriations Committee) will result in any more money coming to our state. But it will assure Alaska that it will not be shortchanged.

— Sen. Ted Stevens

Before Hatfield's reign, the committee was headed by Sen. Bob Byrd, D-W.Va., who used the position to prop up his state's floundering economy with billion-dollar road projects and new federal jobs at agencies that were suddenly moved to West Virginia by virtue of riders on spending bills.

Before Hatfield and Byrd was the legendary Washington Democrat Warren Magnuson whose directives in spending bills financed construction of powerhouses on Columbia River dams that generated more low-cost hydropower for the Northwest, paid for Puget Sound port expansions and brought irrigation projects to arid regions east of the Cascades.

So powerful was Magnuson that after the eruption of Mount St. Helens in May 1980, he rammed through a \$1 billion disaster bill said to have been drafted on the back of an envelope.

Those were different times, of course. The federal deficit was smaller, and few politicians were talking seriously about balanced budgets. Stevens, even more than Hatfield, will be presiding over a spending committee that will have less to spend.

According to Meeds, however, presiding during a period of fiscal retrenchment could make Stevens even more powerful.

"It won't lessen the importance of the office," he said. "His decisions with regard to spending priorities become more important."

Under Senate rules, Stevens would have to give up his chairmanship of the

Senate Governmental Affairs Committee to head up appropriations. He also is a member of two other important committees: the Rules Committee and the Commerce Committee.

Les AuCoin, a former Oregon congressman who was senior Democrat on the House Appropriations Committee, said Alaska could blossom with Stevens running the show in the Senate.

"The chairmanship is a position of enormous influence," said AuCoin, now a lobbyist. "Ted will know how to use it. He's a hard ball player. Having watched him over 20 years, there's a darned good chance that Ted will make Hatfield and Magnuson look like second-string players in terms of taking care of his state."

Stevens isn't promising Alaska the rainbow.

"I would not say that my being chairman will result in any more money coming to our state," Stevens said. "But it will assure Alaska that it will not be shortchanged."

Stevens' 26-year Senate career on and off the committee gives some definition to what he means by "assuring" Alaska.

He has delivered more than \$2 billion to Alaska Natives, with a trickle-down effect throughout the economy, through tax breaks and the 1971 Alaska Native Claims Settlement Act.

Hundreds of millions more have gone to promote logging in the Tongass National Forest, construct hospitals and federal buildings, keep and modernize military bases, build and deepen harbors and finance

village sanitation improvements.

That list is certain to lengthen.

"I think it's a natural thing, if you see money that's going to be spent and it's compatible with your state's economy, to try to get it spent in your state," he said.

What others call "bringing home the bacon" Stevens characterizes as "seizing an opportunity and going out and convincing people that your state is the best for it."

He cited some example of bacon he's been thinking about.

• More money for rocket launched research, such as that at the Poker Flat Research Range near Fairbanks.

"Anyone who looks at a polar launch would tell you that the place to put the polar launch is in Alaska," he said.

• Marine research at the Alaska SeaLife Center.

"We're the place that still has robust marine populations," he said. "I think there's a lot of reasons for us to try to see it that whatever research goes on, goes on at the science center in Seward."

• Subzero testing of military equipment.

"We had artificial subzero laboratories (built) in New Hampshire and Florida," he said. "You could park in a vacant lot in Fairbanks and get the same conditions for four five weeks in a row. What do we do? We take Navy planes to Florida and put them in the subzero chambers and test them there."

• More earthquake search. "I think we ought to convince the federal government that they can find answers in Alaska to things they need to know he said.

"We are looking for a more things like that," he said.

"There will be more," he said, pensively fingering the paperweight on his desk.

"If you're not the chairman, the scenery will change," he said. "If the scenery will change

Duck Flats Project Buyout Plan Given Reluctant Support By Council

CITY HALL—On a split vote of 4 to 2, the Valdez city council Monday night voted to support a developer's request that funds from the Exxon Valdez oil spill trust fund be used to buy up his acreage on the edge of the Valdez Duck Flats.

The developer, Chuck Dennis, expressed mixed emotions about the proposal.

He said he embraced the buyout plan reluctantly after experiencing 15 months of delays, and \$60,000 in costs, in seeking federal and state permits to develop his property.

Dennis owns 4.3 acres along the edge of the Duck Flats between the city animal shelter and the city boatyard. He had hoped to acquire an additional 29 acres from the University of Alaska, dedicate 16 acres to wildlife preservation and build a 900-public boardwalk along the edge of the Duck Flats.

On his highway frontage property he had planned to build an RV park and a boat dealership.

Dogging his footsteps has been Nancy Lethcoe, the co-owner of a marine tour business, who has protested to federal and state agencies.

She urged him instead to seek funds from the Exxon Valdez oil spill trustee council to buy him out.

He told the council Monday night that "if they offered me enough money, I

would get off the land. But it's sad to do that. Once we do that, we can't change our mind five years down the road and say the city needs to grow, we need that land back. It will never be developed."

"But I promised Miss Nancy that I would at least listen to an offer," he added. "I've been riding this donkey for 15 months now and it's gotten pretty rough."

"The war is not just against Chuck Dennis. The war is against the city of Valdez. When you walk into those (public) offices and those people get so involved at throwing rocks against each other that you become a victim the day you arrive. You've got some people who are dead set against what we do in this valley. And it's going to happen to you or anyone trying to develop. I've been caught up in a real rat race."

Dennis said that after a long struggle with public agencies, he anticipates getting a development permit by Feb. 26. "And if I don't get an offer, on May 1 I plan to start hauling gravel."

"Even if I take the money, I will still regret not doing the development," he said.

Dennis' plea to the council set off a round of debate.

Mayor John Harris opposed the resolution.

"If you encourage people to take a buyout of property when they are attempting to



Chuck Dennis On His Property Along the Duck Flats

Star photo

develop something that doesn't show any major environmental damage, that's not a very good statement for people attempting to develop," the Mayor said.

"If we had taken this tack years ago, we wouldn't have the Alyeska pipeline sitting there we certainly wouldn't have Petro Star and we sure wouldn't have a floating Container Terminal," the Mayor added.

"It's the wrong thing to do when we are trying to support business in this community," he told the council.

In defense of her efforts to halt the development, Mrs. Lethcoe said "this particular piece of property brings into conflict the right of individual's the right to develop their own property and the importance of public resources that are dependent on that individual's property, public resources that are used by other businesses and individuals," she said.

"In this case, the waters adjacent to the property and the tidelands are among the most important nursery areas for out-migrating

salmon," she added.

She said the development would change the drainage patterns and the food chain pattern in the area, and impact commercial and sport fishing, tourism and other business, she said.

"It's a difficult public policy decision," she told the council.

In the end, the city council split on the issue by voting 2 in favor of endorsing proposal to buy Dennis' property.

Mayor Harris and councilman Ryan Sontag dissented on the vote.

OPINION

Peninsula Clarion
2/21/96



RIS STAN PITLO
General Manager

BOB HONEA
Production
Director Manager
Corp. Newspaper

Exxon Valdez purchases face big hurdles

By SAM MCDOWELL

Guest Opinion

When the United States purchased Alaska in 1867, it took fewer than seven months for Congress to approve the agreement Secretary of State William H. Seward had signed with Russia.

The speed with which Seward and Congress acted provides a timely lesson for government officials who are entering the third year of buying land in Alaska to offset fish and wildlife damages caused by the 1989 Exxon Valdez oil spill. The threats to completing the five to eight transactions still on the table are likely to multiply two- or three-fold if these purchases are not concluded by the end of the year.

Four serious obstacles already threaten the pending deals: First, membership within the Exxon Valdez Oil Spill Trustee Council could change following the 1996 elections this fall. This could prove disastrous depending on who is appointed to the council since it must unanimously approve each sale.

The current trustees agree with the public's clear mandate that habitat protection is the best use of Exxon settlement funds. Expediency in completing the land purchases is the best insurance against the chance of new council appointments, should there be changes in elected officials later this year.

Second, the approximately \$165 million to \$195 million remaining for habitat acquisition never will buy as much land as it can right now. The longer each sale takes, the more likely land prices will rise.

The trustees already face paying a premium for uncut old-growth spruce stands on Afognak Island because of the high prices these trees command when logged. Should prices continue to escalate, the government's

purchasing power will erode further.

Third, because most of the remaining parcels identified for purchase are forested, pressures mounting on landowners to use their assets will lead to additional timber harvesting. Delays in acquiring these areas — containing some of the world's last Northern Hemisphere rain forest — could mean losing the chance to set them aside for long-term, sustainable uses.

Fourth, as anyone ever involved with protracted negotiations knows, fatigue sets in when weeks of discussions turn into months, and months into years. If the remaining transactions are as long and drawn out as the completed deals have been, the sellers may call it quits and refuse to sell.

Having lived here since Alaska's territorial days — 1948 to be exact — I've seen much habitat disappear and many fish and wildlife population levels decline. For instance, the harbor seal population has collapsed throughout the spill region as has the king crab fishery. Biologists report that the only commercial fish species in the spill area not in decline are salmon.

Completing the remaining Exxon Valdez restoration habitat purchases is important because of these and other adverse impacts to the oil spill region.

Acquiring coastal rain forest on Afognak Island and obtaining long-term protection for the Karluk River in the Kodiak National Wildlife Refuge will help ensure the region's bountiful salmon fisheries continue for generations to come.

The other pending sales around Tatitlek, Chenega, Eyak and in the Kenai Fjords National Park are equally important opportuni-

ties to retain world-class natural resources. We cannot afford to lose them.

Protecting habitat with oil spill restoration funds ensures that Alaskans and all Americans receive a dividend on their investment. The return is paid year after year through such industries and activities as commercial fishing, tourism and personal use hunting and fishing. It also means restoration funds will continue to work in Alaska through the shareholder trusts established by the Native corporations whose lands are purchased.

Last fall, the trustee council closed two more purchases involving Shuyak Island and the Kodiak National Wildlife Refuge. The trustees and landowners involved with these sales, as well as five others that preceded them, are to be congratulated. As a result, some 361,000 acres of habitat have been protected in perpetuity or by conservation easement.

Now the Exxon Valdez Trustee Council and landowners need to continue to do everything they can to ensure that the pending acquisitions, which involve hundreds of thousands of additional acres, are completed by the end of 1996.

When putting together a real estate deal, time is of the essence. This maxim applies just as much to public land sales as it does to commercial or residential real estate transactions.

Neither the buyers nor the sellers can afford delays. The time has come to finish the appraisals, sit down at the table, and negotiate the best deals possible. To do otherwise only cuts short this unique opportunity to turn the nation's worst oil spill into a lasting conservation legacy.

Sam McDowell is a director-at-large with the Izaak Walton League of America, a national conservation group founded by sportsmen in 1922. He lives in Anchorage.

save its elf study

SCIENCES IS STUDYING
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ADN
Friday 2-23-96

Disgruntled angler blasts Fisheries Board

The Associated Press

A California environmental lawyer with a yen for king salmon told the Alaska Board of Fisheries he's mad and he's not going to take it any more.

The trouble started when Patrick J. Marley paid \$5,000 in July for a two-week stay at a luxurious Kenai River lodge and a guarantee of two king salmon.

The kings were scarce for sport anglers. But set-netters, in the midst of an

emergency opening for red salmon, were catching plenty of kings, Marley told the board at its meeting Wednesday.

When the Los Angeles lawyer called the state Department of Fish and Game to complain, he was advised to tell it to the state Fisheries Board — which wasn't meeting for months.

On Wednesday he got his chance, as one of 237 people who signed up to address the board's Anchorage meeting.

Marley began by praising the board as a "well-balanced, intellectual" panel. But, he said, the Kenai fishery itself was "the lousiest job of management of a quality fishery" he'd ever seen.

"They're going to change the management procedure in this state or most likely I will sue to force them to follow their own, upper Cook Inlet salmon management plan," Marley said.

Phil Cutler, president of the Alaska Sportfishing

Association, said he too wants to see more salmon released in the Kenai but he's concerned about bank degradation.

"Sport and commercial fishermen have a lot in common," Cutler said. "They both have to have a lot of fish to catch a lot of fish."

Cutler said he favors the release of up to 900,000 red salmon into the river compared with the current range of 450,000 to 700,000, with a goal of 550,000 fish.

Anchorage Daily News Thursday 2/22/56

Fish Board returns to the battle of False Pass

Attorney general says he can't defend earlier chum catch decision without majority vote

By TOM KIZZIA
Daily News reporter

The state Board of Fisheries voted Wednesday to reopen the long-standing debate over the interception of western Alaska salmon by commercial fishermen in the False Pass region.

Acting on advice from the state attorney general, the board agreed to meet April 13-14 to reconsider a 700,000-fish cap on chum salmon catch imposed on the Area M commercial

fishery. The decision throws open the controversy to a seven-member regulatory board that includes two new members, appointed by Gov. Tony Knowles since the issue was last discussed in January.

If the board doesn't act, the June fishery won't take place.

The Fish Board interrupted public testimony over allocation of Cook Inlet salmon to hold executive sessions Tuesday and

Wednesday regarding the only salmon fight in Alaska that is even more controversial. The sessions were closed because the board was discussing litigation.

The cap was set by the board in 1992 out of concern that the Area M fishery, which targets red salmon, might be intercepting too many chums bound for commercial and subsistence nets north of False Pass, including Norton Sound and the Yukon and

Kuskokwim rivers.

Western Alaska fishermen think the cap is too high. They won an injunction from Superior Court Judge Richard Erlich last fall halting June's Area M fishery until the Fish Board came up with a written scientific or historical justification for the 700,000-chum cap.

The Fish Board drew up a justification in January and approved it by a 3-2 vote, with two board members disqualified because

they make a living from fisheries in the dispute. But Attorney General Bruce Botelho said he cannot defend the board's position unless four members — a majority of the entire board — vote to adopt it.

Fish and Game Commissioner Frank Rue told the board this week that a new meeting will be necessary to prevent a shutdown of the June fishery, a mainstay of the Alaska Peninsula

Please see Page B-3, BOARD

BOARD: Fish panel takes up False Pass issue again

Continued from Page B-1

la economy, valued at \$10 million to \$15 million.

The new developments were disappointing to Area M fishing interests, said Denby Lloyd, chief resource analyst with the

Aleutians East Borough.

"The attorney general is not defending the board process here," Lloyd said. He said he would rather have seen the state urge Erlich to accept the written justification drawn up by

the board in January.

According to the agreement drawn up Wednesday, the April board meeting will be limited to chum salmon issues. But the board will be free to rewrite the chum manage-

ment plan, said Robert Bosworth, head of the Department of Fish and Game subsistence division.

The public will be limited to offering written testimony before the two-day April meeting.

Fisheries expert warns Alaskans

By TOM KIZZIA
Daily News reporter

Cook Inlet's salmon runs appear to be thriving, but they are on the threshold of the same "cycle of loss" that wiped out salmon runs in northern Europe and the Pacific Northwest, an Oregon fisheries consultant warned this week.

Urban growth, overfishing and open seasons that failed to account for declining productivity killed most salmon runs outside the northern Pacific. Those same factors are lined up now to send Cook Inlet into a downward spiral, consultant Phil Mundy told the Alaska Board of Fisheries in Anchorage.

"The pace of development is inexorable," said Mundy, hired as a mediator by Gov. Tony Knowles in an unsuccessful effort to draw up a new consensus on salmon allocation for the Anchorage region.

"This cyclical process of salmon extirpation, or loss, has been repeated enough times for us to understand that it is always the same, no matter where it occurs."

Mundy's warning has echoed through a week of public testimony at the Fish Board over the future allocation of Cook Inlet salmon.

"If we don't monitor these stocks, in my opinion the Kenai River is going to be the Columbia River in the year 2005," Fish Board member John White of Bethel said Friday.

The board will meet all next week, with deliberations on allocation proposals expected to begin Sunday or Monday.

The mediator's final report drew praise from both commercial and sport fishermen.

"He helped make re-

Please see Back Page, SALMON

Mundy described threats to habitat far beyond the commonly discussed problem of bank damage along the Kenai River. He drew a quick portrait of a changing region, from the logged-over watersheds of the Anchor River and Deep Creek to the urban sprawl around Wasilla. Increased tourism is changing the rural landscape, and the number of nonresident fishing licenses has soared.

Commercial fishermen said Mundy's message means new watershed developments — as well as allocation decisions by the board — must be closely tested for their effects on habitat. A major focus of concern this week has been Kenai Peninsula logging in the path of a spruce bark beetle epidemic, which fishermen said may trade away the region's future salmon runs for a short-term economic boon.

"Development has to be

demonstrably compatible with fish and wildlife resources, or don't do it," said Matthews.

Despite recent changes, salmon catches are still high. But like fishery managers in the Pacific Northwest, state biologists lack the basic research necessary to detect declines before catches go into a tailspin, Mundy said.

Biologists don't know how many spawning salmon are necessary to produce healthy runs for most species in most Cook Inlet streams. The exceptions are the red salmon of the Kenai and Kasilof Rivers, the Inlet's biggest producers of commercial salmon.

The state also lacks basic information about factors governing freshwater survival for juvenile salmon, marine survival rates, and the mix of salmon runs caught in commercial and saltwater sport fisheries.

Such information is

more available in Southeast Alaska, said Fish Board member Grant Miller, a Sitka commercial fisherman. Miller said Friday the "huge blank spots" make it all but impossible to manage Cook Inlet for the long term.

"What's scary is funding for Fish and Game has been continually hampered and reduced until they can't do anything," Miller said.

State Fish and Game officials said they do not think a downward spiral has begun. But they say Mundy highlighted a major problem: department research is usually directed at sorting out high-profile allocation fights, adding only coincidentally to an understanding of how the Inlet produces salmon. Funding for basic research is seldom available, they said.

"From a conceptual standpoint he's right on

Continued from Page A-1

source conservation issues the focus of the meeting so far. They've eclipsed allocation," said Karl Kircher, president of Kenai Peninsula Fishermen's Association, a commercial setnet group.

Anglers singled out Mundy's warning that the Inlet's smaller salmon runs need protection from fisheries targeting the biggest runs.

"He's saying the status quo has got to change," said Ben Ellis, executive director of Kenai River Sportfishing Inc. "He said if you don't have the data to manage for genetic diversity, you get it."

Commercial fishermen said they initially feared that Mundy would use his time before the board to make a veiled pitch for increasing the allocation for anglers. But his presentation Sunday reassured them.

"This is a fair world product," said Theo Matthews, executive director of United Cook Inlet Drift Association.

Mundy, a former chief fisheries scientist for the Alaska Department of Fish and Game, said the familiar "cycle of loss" begun with population pressure Growth brings logging mining and urban development along with more demand for salmon. Watershed degradation follows and rivers can no longer support as many salmon.

Under the common scenario, Mundy said, fisheries continue as if habitat changes had not occurred. The weak stocks disappear first. In the Pacific Northwest, unusually high survival of salmon at made the runs appear healthy at a time when rivers were losing the ability to produce new generations.

In the Cook Inlet region,

target," said Kevin Delaney, director of the state's sportfish division. "The chance of doing that kind of research is totally dependent on public support, which translates into funding."

In other places where salmon disappeared, fisheries were managed crudely on the basis of how many salmon were caught each year — if they were managed at all. In Alaska, biologists attempt to manage on the basis of escapements, which means getting optimal numbers of fish into rivers to spawn. That puts Alaska in a better position, said John Hilsinger, Fish and Game regional supervisor for commercial fisheries.

But escapement data is limited, even in Cook Inlet. Most runs of highly prized silver salmon in the Susitna River tributaries, for example, are still managed on the basis of harvest numbers.

ADN

Saturday 2-24-96

Fishing cops win new bite

State board cites habitat protection

By TOM KIZZIA
Daily News reporter

The state Board of Fisheries took an unprecedented step Monday to protect salmon habitat, giving state biologists power to close damaged or endangered riverbanks to public fishing.

The Fish Board voted unanimously to give the Department of Fish and Game authority to outlaw fishing on public lands alongside Cook Inlet streams and lakes if necessary to protect stream banks from trampling.

The new action will allow fish and wildlife protection officers to cite anglers caught in no-fishing zones. Until now, the only recourse for public land managers was to fence off sensitive riverbanks and put up signs.

A task force created last year by the board recommended that Fish and Game should be able to close fishing on the Kenai River, where extensive riverbank habitat damage has been documented. But the board went even further Monday, extending the new authority to the entire upper Cook Inlet region.

The board also said it will consider the impact on habitat of any future decision to build up in-river sport fisheries.

Some closures will be in place by summer along the Kenai River, state biologists said Monday. They said studies probably would be necessary before habitat closures would be imposed in other popular fishing areas like the Mat-Su valleys and the lower Kenai Peninsula.

Monday's action marked the first time the state Fish Board has invoked habitat as a reason for

ADN

Tuesday 2-27-96

PANEL: Fish cops gain new powers

Continued from Page A-1

vote was praised by both sport and commercial fishing groups.

Fish and Game gave several examples of possible no-fishing zones along the Kenai River:

- As a temporary measure where past bank-trampling damage is being restored, such as at a state park at Bing's Landing.

- On riverside lands and conservation easements purchased to protect habitat.

- On undisturbed lands threatened with a sudden influx of bank anglers, including pristine Kenai Peninsula Borough lands near Soldotna adjacent to a major new recreational vehicle campground.

- On grassy areas where walkways have been provided for anglers, such as land near the Soldotna airport.

The state said it would consider the impact of any closure on adjacent lands, since a closure could shift angling effort from already-trampled riverbanks to still-pristine areas.

The Fish Board has authority to regulate fishing to protect fish populations. That authority can be extended to protect habitat whenever a scientific link can be made between damage and potential declines in salmon production, said Doug McBride, regional supervisor of the Fish and Game sportfish division.

Natural grassy riverbanks are considered crucial rearing habitat for juvenile king and silver salmon. A state study

found 12 percent of the Kenai River's banks have already been altered by human use. Biologists have warned that continued degradation could cause the famous salmon runs to crash.

The new closures will be imposed only on public lands and will be used sparingly, said sportfish division director Kevin Delaney. The state also plans to develop a future program to authorize no-fishing zones on key parcels of private Kenai River land, Delaney said.

Most closures would be made with new regulations and a public comment period, Delaney said. The state also has authority to make emergency closures.

The Fish Board action to protect riverbanks throughout Cook Inlet came during a two-week meeting where "habitat" had become a cudgel in an allocation war that threatened to create an anti-protection backlash.

Commercial fishermen said they are worried about Kenai River habitat because a decline in king salmon returns will force them to pull their nets out of the water. But sport fishermen charged repeatedly that habitat problems have been exaggerated as an excuse for cutting back in-river allocations to anglers.

"The dangerous part of all this is that misuse of habitat information tends to desensitize the public to the importance of it," said Ben Ellis, executive director of Kenai River Sport-fishing Inc.

"Bank degradation peaked," Kenai River activist Bob Penney testified before the board. "K habitat has become a commercial (fishing) problem. The issue behind it is education."

Others said habitat problems are minor. "Mat-Su streams, compared around boatings and the mouth of clearwater streams, said riverbank damage should not be used as an argument against angling more silver salmon in the northern Inlet."

"We don't have a big problem up there," testified Carl Grauvogel of the Mat-Su Fish Game advisory committee.

Fish and Game biologists say other information this month about concerns in the region ranging from trampling and boat erosion to construction fill along riverbanks. Information was collected in a response to a request of information from a commercial organization.

The first comprehensive Mat-Su habitat study be undertaken on the Susitna River next summer, Delaney said.

Grauvogel said he has no problem with new state authority to close fishing on streams to protect habitat. "If what they say is true and they have valid reasons to protect it, I don't think it would be opposed," he said.

Guided sportfishing behind two fights board must settle

By TOM KIZZIA
Daily News reporter

On the upper Kenai River, where a new study says the number of rainbow trout has doubled in a decade, guides and lodge owners want the state to reopen spring fishing on trout spawning beds. They say a decision three years ago to close spring fishing was hard on local businesses.

On the lower Kenai Peninsula, king salmon runs are down in Deep Creek and the Anchor River. The state proposed

reducing catches on those rivers, but river anglers said the state needs to cut back the booming guided saltwater fishery as well.

The state Board of Fisheries began deliberating Cook Inlet issues Sunday, and two of the biggest sportfishing controversies ahead are only remotely connected to allocation fights with commercial fishermen. Instead, the driving issue is the growing tourist economy based on guided angling.

"The Kenai River is not a system that can withstand becoming salmon capital of the world," said Sterling angler Ed Krohn, chairman of the Kenai-Soldotna Fish and Game advisory committee, who testified that crowds have made fishing the river unpleasant.

Commercial fishermen brought up the tourist industry repeatedly before the board last week.

Commercial netters said the demand for more salmon in Cook Inlet rivers

comes from guides trying to guarantee fish for their clients. They cited state figures showing that nonresident licenses have doubled since 1984, surpassing the relatively unchanged number of resident fishing licenses.

"This fight is about money, and most importantly jobs," testified Don Beeson, Icicle Seafoods plant manager in Homer. On the other side, much of the oral

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testimony in favor of greater sportfish allocation came from guides and fishing lodge owners.

"If we're going to have a tourist industry, there needs to be more reds in the river," said Soldotna lodge owner Bill Wirin.

Sportfish activists pointed out that the majority of Kenai River anglers are residents. Still, they did not attempt to downplay the growth in guided nonresident anglers, saying the tourism industry is important to the region's economy.

"I'm not going to make excuses for it," said Pat Carter, former president of Kenai River Sportfishing Inc. "The increase in tourism is vital for the economy of Alaska."

Some guides said the way to slow down the growing pressure of guided anglers is to limit the number of guides in crowded fisheries. Such a move is beyond the reach of the Fish Board, probably requiring an amendment to the state constitution, according to the guides' professional groups.

"The guides are desperate to get some sort of limited entry here," said Deep Creek guide Mel Erickson.

On the upper Kenai River and at Deep Creek, the growth in guiding has been the source of friction among anglers.

Three years ago, the state closed all fishing on the upper Kenai River after April 15, citing concerns about rainbow trout populations. While it had been illegal to fish for spring rainbows for a decade, anglers had been allowed to continue fishing for dolly varden trout and red salmon. Some of those anglers were catching rainbows, the state said.

Since even catch-and-release fishing kills some fish, the Fish Board closed the river to all trout fishermen until June 15. Department of Fish and Game biologists were concerned that the fast-growing summer trout fishery could be reducing rainbow numbers.

But a study last summer found that rainbow numbers on the upper river had doubled since 1986.

Cooper Landing businesses are now petitioning the board to reopen the early part of the season. They said they lost 20 percent of their business because they couldn't open until mid-June.

"It's time to step back and look at this a little differently," said Bob Andres, owner of the Troutfitter guides and a Cooper Landing motel.

Acknowledging that such a proposal challenges popular wisdom regarding rainbow trout, Andres cited biological as well as economic arguments.

He said he thinks the rainbows are smaller because their population is so great. He said the upper river's trout could end up hurting the river's red salmon runs by eating too many eggs. Perhaps, he said, more red salmon must be admitted to the Kenai to provide more

"I'm not going to make excuses for it. The increase in tourism is vital for the economy of Alaska."

— Pat Carter, former president of Kenai River Sportfishing Inc.

"Even where we have a harvestable surplus, we have a responsibility to protect spawning fish."

— Kelly Hepler, regional management biologist

food — an option opposed by commercial fishermen.

"You can't limit the number of salmon and let the other side of the equation go unchecked," he said.

In any event, the state's rationale for closing spring fishing has disappeared, he said.

State biologists say it's bad policy to allow anglers to fish when trout are spawning because they are aggressive and easily stressed. Biologists have proposed instead extending the trout season after Oct. 31, though many trout have swum into area lakes by then.

At the same time, the state is proposing moves to protect dolly varden trout, including a cut in the daily bag limit from five to two.

"Even where we have a harvestable surplus, we have a responsibility to protect spawning fish," said regional management biologist Kelly Hepler.

The 11th-hour Cooper Landing proposal is unlikely to win much support from flyfishermen, who generally supported the spawning closures, said Jeff Parker, state vice president of Trout Unlimited.

On the lower Kenai Peninsula, the state stirred a reaction among anglers last fall by proposing to reduce the fishing effort on Deep Creek and the Anchor River without limiting the nearby saltwater fishery. Growth of the offshore fishery has been pushed by increasing guided effort, with the guided harvest rising from 11 percent to 46 percent in the past five years, the state said.

Local advisory committees on the Peninsula and Anchorage proposed reducing the areas around the mouths of those streams where boats can fish. Some guides have endorsed the idea, while others say it would hurt their business.

The state has now amended its proposal to the board, saying it wants to limit saltwater harvest in the area to 8,000 kings — about the current catch. Other new limits on the troll fishery have been suggested by the state as well.

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Anglers' red take boosted

Decision angers
commercial crews

By TOM KIZZIA
Daily News reporter

Sportfishermen won a long-sought victory for Cook Inlet on Tuesday night when the state Board of Fisheries voted unanimously to allow up to 150,000 additional red salmon to swim past commercial nets and into the Kenai River.

Depending on further board action this week, the decision will probably force new closures on Kenai Peninsula setnetters and bring additional king salmon to the Kenai River in July.

The increase could double the daily bag limit for red-salmon anglers to six and push spawning numbers slightly past the current target for maximum productivity.

The higher in-river allocation of sockeyes could also bring more sportfishermen to the river, resulting in more riverbank habitat damage, board members acknowledged. The Fish Board told officials at the state Department of Fish and Game to measure the impacts, saying it would lower the red-salmon allocation in three years if habitat damage by anglers increases.

The Fish Board based its decision on a new set of "guiding principles" adopted this week to govern Cook Inlet salmon allocation. The principles call for the board to consider such things as habitat, the best scientific information, and maintenance of genetic diversity in the overall salmon population by preserving small salmon runs.

The principles were drawn in large part from recommendations by fisheries consultant Phil Mundy, hired by Gov. Tony Knowles in an unsuccessful effort to mediate a change in the way Cook Inlet salmon are allocated.

Commercial fishermen, stunned by the swift debate and sudden reversal of fortune before the

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board, said the additional closures could cut some set-netters' income in half.

The new decision requires Fish and Game to manage Inlet fisheries this summer so that between 550,000 and 800,000 reds reach sonar counters on the Kenai. Some of those fish will be caught by anglers and most will spawn. The top end of the formula rises to 850,000 by 1998. The old management plan called for a target of 450,000 to 700,000 fish.

Angry commercial fishermen said they were being cut back to meet the needs of non-resident anglers, whose numbers have been growing rapidly. They said the board ignored public testimony, staff reports and its own new principles — especially regarding habitat — in a rush to satisfy sportfish activists who backed the election of Knowles.

"This thing was greased from the word go," said Soldotna setnetter Gary Hollier.

But Kenai River sportfish activist Bob Penney said Tuesday's decision proved the board is willing at last to listen to demands of the public at large.

"This is exactly what the governor promised us, and it's working," Penney said after Tuesday's vote, interrupting himself to accept congratulatory handshakes from other sportfishermen. "The board totally refused to listen for 18 years. Now they're listening. It means democracy is working."

Knowles, elected in 1994 with support from Penney and other sportfish activists, added two members to the Fish Board immediately before the current meeting. Leading the board's debate Tuesday was new appointee Dan Coffey.

Coffey said he would oppose an allocation increase if it resulted in a net loss of habitat. But he said during the debate he believed Penney's testimony that habitat improvement projects on the Kenai River were making up for new damage. Coffey, an Anchorage lawyer, worked with Penney on several sportfish organizations and was backed by him for the board.

The increase could double the daily bag limit for red-salmon anglers to six and push spawning numbers slightly past the current target for maximum productivity.

"I would like to take Mr. Penney at his word that we have turned this thing around," Coffey said.

The comment brought howls from commercial fishermen in the audience, who later pointed to a 1995 Fish and Game study showing increased habitat trampling by anglers.

"One hundred people testified there was a habitat problem on the Kenai River. Bob Penney said there wasn't, and he turned the board around," said Karl Kircher, president of Kenai Peninsula Fishermen's Association, a set-netters group.

The board improvised a way to monitor changes to river habitat, telling Fish and Game to repeat a 1994 study of riverbank damage along the Kenai. Sportfish division director Kevin Delaney said the study can be repeated but will have to begin with a new baseline study because of changes to the river caused by a 100-year flood last fall.

Commercial fishermen said the higher in-river returns could reduce the Kenai River's productivity over time. Fish and Game says the Kenai produces the most fish when spawning escapements are between 330,000 and 600,000 fish. Under the high end of the new in-river target, even with a six-fish bag limit, 680,000 fish might return to spawn, biologists testified.

The new number is in an untested range, but is close enough to the known ideal to pose no great problem, Delaney said after the vote. Board member Dick Bower said the additional salmon carcasses could enrich the river's ecosystem.

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Spill-money managers offer \$7 million for Cordova land

By NATALIE PHILLIPS

Daily News reporter

Government officials spending Exxon oil spill money voted Wednesday to offer Eyak Corp. \$7 million for 11,200 acres of land surrounding Power Creek, Eyak River and Eyak Lake, which are near downtown Cordova.

The Exxon Valdez Oil Spill Trustee Council decided to make the offer after learning that the Native corporation intended to begin helicopter logging the land in mid-March, according to council

executive director Molly McCammon. The council has been unsuccessfully negotiating to buy up to 28,500 acres of Eyak land for nearly four years.

Eyak Corp. board president Nancy Barnes said Wednesday that she had not seen the offer, so could not comment on it. However, she said, "if the council has an offer, they know our door is always open."

A draft government appraisal found that the land was worth \$2.9 million to \$3.9 million, McCammon said. The Trustee

Council decided to offer more, McCammon said, because it is unlikely that Eyak Corp. would accept the appraisal price for the land. Also, the land is considered valuable for helping restore species injured by the 1989 Exxon Valdez oil spill, McCammon said.

Trustee Council biologists and land planners developed an elaborate system for ranking parcels of land for purchase with settlement money. The Eyak parcel ranked moderate under the plan.

Deep Creek, Anchor anglers get fewer kings

The Associated Press

The Alaska Board of Fisheries on Wednesday slashed the combined season bag limit to two king salmon from Deep Creek and the Anchor River in a move to rebuild dwindling stocks.

The board's 7-0 vote came in the face of increased harvests and declining escapements.

The board is expected to take similar conservation steps today to restrict sport anglers harvesting kings in Cook Inlet's nearby salt water fishery. Options under consideration include limits on bait, fishing times and season limits.

State biologists say the sport harvest in the salt water off the two streams has increased dramatically in recent years, while escapement dropped.

"The in-river restrictions the board passed address our conservation concerns," said Dave Nelson, a state area management biologist for sport fishing. "We'll see results in 1996. We'll see more fish on the spawning grounds."

The board's action keeps the overall season bag limit at five kings, but limits to two the combined harvest from the popular fishing streams.

The board cut the king fishing season in Deep Creek from five weekends to three, barred further fishing in Deep Creek and the Anchor River the same day a king salmon has been harvested and closed July fishing in both streams starting two miles from the mouths.

The board also closed the Anchor River

KINGS: Deep Creek, Anchor River limits cut

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drainage upstream from the junction of its north and south forks to salmon fishing, along with spawning areas of the Ninilchik River and Stariski Creek.

Deep Creek escapements have not met department goals in at least three of the past seven years and the last four years have seen record harvests, biologists said. In the Anchor River, escapement goals have not been met in at least two of the last seven years.

The two streams have supported recreational fisheries for kings since before statehood.

Road accessibility, the opportunity to fish from

shore, and relatively clear water made these streams popular with anglers long before the salt-water king fisheries developed. Shore fishing prevails because powerboats cannot negotiate the narrow, shallow stream channel.

The salt-water fishery for king salmon began in the early 1970s, remained fairly stable through the late 1980s and has grown substantially in the 1990s, largely because of an increase in guided non-resident anglers.

Recent annual harvest of more than 10,000 fish make this the third largest recreational king salmon fishery in the state, biologists said.

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Most Kenai silvers go for sport

Fish and Game report finds commercial fishermen took sliver of '94 catch

The Associated Press

KENAI — An Alaska Department of Fish and Game report submitted to the Alaska Board of Fisheries recently contained a few surprises for sportfishermen on the Kenai River.

Maybe even for the report's authors.

Sport anglers are harvesting the bulk of the Kenai River's silvers, according to the report.

"We went into this study expecting to find that eastside setnetters caught more Kenai cohos than they actually catch," said Terry

Bendock, a fisheries biologist in Fish and Game's Soldotna office.

The report, "Assessment of Coho Salmon in Upper Cook Inlet," was compiled by Jay Carlon, another fisheries biologist with Fish and Game in Soldotna. It concludes that in 1994, sportfishermen hauled in 73 percent of the Kenai River silver harvest, or 87,000 fish. In 1993, sportfishermen took 84 percent of the total harvest, or 51,000 fish.

According to the report, Upper Cook Inlet commercial fishermen took 13 per-

cent of the Kenai-bound silvers in 1994, or 27,000 fish. Eastside setnetters captured the bulk of those, taking 88 percent of the commercial harvest. The study also indicated that most of the commercial drift fleet's catch of silvers was bound for northern Cook Inlet streams, rather than the Kenai River.

The report found that the sport harvest of Kenai silvers increased eightfold between 1977 and 1994, reaching a record high of 87,000 silvers in 1994.

The report also said that since the department has

no means in place to measure escapement, it is impossible to tell if these harvest levels are sustainable.

Bendock said Fish and Game can get a ballpark estimate of the size of a run of silvers by tagging fish when they are smolts heading out to sea. When they return, the total number of fish in the run can be extrapolated from the ratio of tagged to untagged fish harvested. But they haven't figured out a way to measure how many fish get away to spawn.

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Rainbows' gain is Dollies' loss

Less-coveted fish may be filling too many dinner plates

The Associated Press

Efforts to protect rainbow trout in the upper stretch of the Kenai River could be hurting the rainbow's less-coveted and less-studied cousin, the Dolly Varden.

While rainbows are thriving in the Kenai River between Skilak Lake and Kenai Lake under tight management, there are signs that the Dolly population is in decline.

Anglers in the area must throw back all but the largest rainbows. So researchers suspect the fishermen are turning to Dolly Vardens to fill the dinner plate.

Biologists and anglers say more should be done to protect Dollies, and new fishing restrictions for the pink-spotted char may be coming.

Since the early 1980s, rainbow anglers on the upper Kenai have faced increasing restrictions. Now, all rainbows under 30 inches long must be released. No bait can be used. And fishing time has been shortened to protect spawners.

A recent study by the Alaska Department of Fish and Game shows those rules have paid off. Twice as many rainbows were counted in a popular three-mile stretch of the river than were counted 10 years ago, despite a dramatic increase in fishing pressure.

Biologists have little data on the health of the area's Dolly Varden population. The information they do have, though, does not bode well.

Catches of Dolly Varden in the upper Kenai rose in the early '90s, going from 14,151 in 1990 to 30,601 in 1991. In 1994, the last year for which statistics are available, anglers caught 33,168 Dollies between Kenai Lake and Skilak Lake, keeping 2,052.

A decline in catches on two popular tributaries of the Kenai is more worrisome.

On Quartz Creek, anglers caught 11,702 Dollies in 1994, compared with 21,473 the year before. On Ptarmigan Creek the

Biologists and anglers say more should be done to protect Dollies, and new fishing restrictions for the pink-spotted char may be coming.

catch dropped from 8,202 in 1993 to 1,877 in 1994.

That data confirms anecdotal information from anglers who say Dollies are becoming tougher to catch.

So the state Fish and Game Department is proposing tighter restrictions on Kenai River Dolly fishing while more research is conducted.

Fish and Game's proposals include:

- Changes to daily bag limits. Two Dolly Varden could be kept per day on all lakes and streams on the Kenai Peninsula. The Kenai River already has a two-fish limit, but as many as five can be taken in other areas.

- Size restrictions. Anglers in the Kenai River drainage above Skilak Lake would have to release all fish between 12 inches and 24 inches long. Only one fish longer than 24 inches could be kept per day.

- Ban on bait. Single-hook, artificial lures only would be allowed when fishing for Dollies in the upper Kenai and its tributaries.

Biologists say local advisory boards and many anglers support the department's proposals. Anglers are starting to recognize the Dolly Varden as a valuable sport fish, they report.

Fish wheels to reappear on Yentna River

By TOM KIZZIA
Daily News reporter

The fish wheel will return to the Cook Inlet region for the first time since statehood under a plan approved this week by the state Board of Fisheries to resolve a nagging subsistence dilemma in the Susitna River valley.

The Fish Board created a new personal-use fishery for salmon on the Yentna River downstream from the off-road settlement of Skwentna. Alaska residents will be able to use fish wheels along several miles of the Yentna to catch salmon, up to a total of 2,500 fish in a summer.

Residents of the Skwentna region have been seeking a subsistence fishery on the river for a decade, arguing they meet the historical and social criteria under state

law. The area already has a state subsistence hunt for moose.

Skwentna lies just outside the state's nonsubsistence area that covers most of the Cook Inlet region.

Desire for a subsistence fishery has increased in recent years, as local residents found themselves battling guests of fishing lodges for the chance to catch salmon in clearwater tributaries, said Tom Peyton, who presented the Skwentna proposal to the Fish Board.

"You've got old-timers up there ready to start shooting guides and vice versa," Peyton said.

Many residents have turned to use of illegal nets in the glacial Yentna River, said Peyton. "We've had, you would call it, an unlawful fishery up there going on forever."

The Skwentna request had been turned down twice by the Fish Board, in 1988 and 1992. Board members said Skwentna didn't qualify for subsistence because of population turnover and other differences from three Native coastal villages with subsistence fisheries in Cook Inlet.

"They used the fact that it was a non-Native village against us," Peyton said.

Lingering in the background have been concerns about how a new subsistence fishery at the tail end of an erratic salmon run could whiplash salmon management throughout Cook Inlet.

Subsistence fishing is open to all Alaskans and has priority over all other fisheries. Commercial and sportfishermen

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SALMON:

Board OKs use of fish wheel

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were concerned about closures that might be necessary to ensure enough salmon reach Skwentna.

At its Cook Inlet meeting Tuesday, the board turned down the subsistence proposal, then voted 4-3 to create a new personal-use fishery.

Personal use is managed on an equal footing with other fisheries. The board approved a 25-fish limit per head of household, with 10 fish for each additional member.

The board's three sportfish representatives voted against the new fishery, expressing fears that it would grow too large.

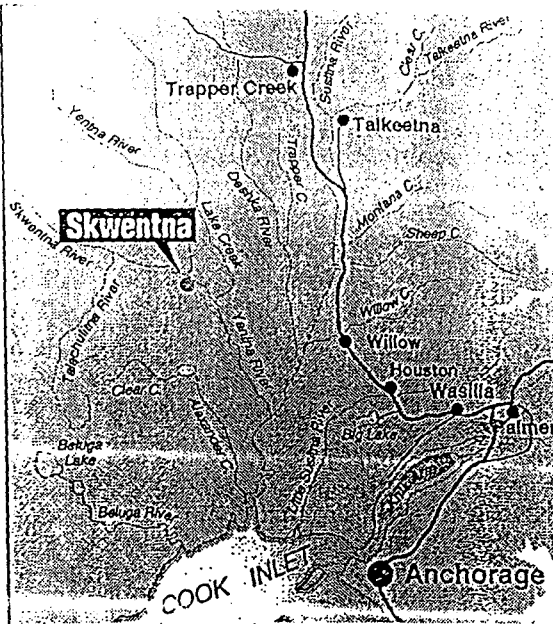
The chance to use a fish wheel for personal use will go a long way toward satisfying Skwentna's needs, Peyton said. He said it won't be a major reallocation of fish because many salmon now are being taken by sport and illegal means. But some residents may want to continue pressing their case for a subsistence fishery, he said.

Fish wheels scoop migrating salmon from the water with current-driven paddles. They are a traditional method of harvest still used in Interior Alaska. The last fish wheel on the Yentna River was used in the 1950s, according to the subsistence division of the state Department of Fish and Game.

The Fish Board put a sunset on the new fish-wheel fishery, saying it will take another look in three years. The board wants to be sure harvests don't exceed the 2,500-salmon cap, either through illegal fishing or through continued growth of the area's summer population.

During debate at the Anchorage meeting, Fish Board chairman Larry Engel said the fishery could be used heavily by small, portable fish wheels brought to Skwentna by high-speed riverboats.

"It only takes two hours to get there, as long as it takes for me to drive from Palmer to here," Engel said.



Skwentna at a glance

■ **Location:** Skwentna is in the Yentna River valley on the Skwentna River at its junction with Eightmile Creek, 70 miles northwest of Anchorage.

■ **Transportation:** Riverboat; daily commuter service or air charter service from Anchorage.

■ **Population:** About 20 locally; 200 or more in the surrounding area.

■ **Climate:** Warmest month is July; coldest is January. Average annual precipitation is 28 inches, including 119 inches of snow.

■ **History:** Skwentna was founded in 1923 when Max and Belle Shellabarger homesteaded and started a guide service and later a flying service and weather station. After WWII, the Army built an airstrip and maintained a small post for a short time. The airstrip was turned over to the FAA, which maintained it until the early 1970s when it was abandoned. The community grew up around the airstrip, which the state started maintaining in 1981.

Skwentna is an official checkpoint on the Iditarod Trail Sled Dog Race from Anchorage to Nome each March, as well as a gas stop for the Iron Dog snowmachine race in February. It is also the turnaround point for the Iditarod cross-country race.

■ **Facilities:** Communications include Bush phone service, twice-weekly mail plane, radio, and satellite television. The community has a school that offers grades one through 12 depending on demand. There is no church. Electricity is from private generators; water from river or wells. Sewage systems vary from flush toilets to outhouses. Freight arrives via periodic barge service or plane.

Source: The Alaska Wilderness Milepost

Opinion

Eyak Lake, Eyak River and Power Creek are priceless and are not for sale

Editor's note: The following opinion is provided by the author as an insight into the proposed logging of old growth forest along the shorelines of Eyak Lake, Eyak River and Power Creek by the Eyak Corporation, Sherstone Inc., ITT/Rayonier Inc., and Columbia Helicopter Logging Inc.

By Glen E. "Dune" Lankard, Jr.

No matter what corporate representatives or politicians present, do not take your eyes off the prize — in this case, the Eyak Rainforest. You can clearly see from past experience the end results of their words," Lankard said.

As we near the seventh anniversary of the Exxon Valdez Oil Spill (March 24, 1989), it is quite apparent the politics which surround the Exxon Valdez Oil Spill Trustee Council negotiation process are just as insane as the massive clearcuts that already plague this once pristine and unique ecosystem we call home.

Over the last five years the Eyak Corp. and the Trustee Council have been largely unsuccessful in negotiating a comprehensive settlement to protect the Eyak Rainforest(s). Only one small deal has been brokered to protect 2,000 acres of forest, near Orca Narrows, just outside of Cordova. At the rate the Trustee Council is moving to protect these forests, this 2,000 acre parcel could be the only forest left standing on private Native lands in the entire Prince William Sound.

After reading the Eyak Corp.'s proposed visual cut stories and hearing how aesthetically pleasing their logging practices (from here on out),

will be, I am convinced that they actually believe their planned, formal statements (just look across the bay).

The long-term cultural, social, environmental and economic impacts will be much greater than the visual cut story explains. This visual cut will take place within city limits in the newly annexed area, surrounding our public watershed. This region is still considered private Native land, but it should not be exempt from cultural, social, environmental and economic impact statements which protect the public's interest as a whole.

So why is it?

The Eyak Corp.'s spokespeople (currently Luke Borer and Nancy Cecile Barnes), say that "their logging activities are very important to our shareholder's welfare, in providing jobs and paychecks, self-respect and self-determination for local Natives, and that logging allows the Eyak Corp. to diversify its current operations, away from being totally dependent on logging." What?! Who are they talking about? It is certainly not the shareholders who are benefiting from these natural resource extraction projects now, in the past, or in the future. And, how does logging our forests help the Eyak Corp. to diversify from logging?

Let's focus on the Eyak Lake, Eyak River and Power Creek for the moment. It is said that this will be an environmentally friendly, visually selective and sound development cut on Eyak Native lands. This is true, as it is our Eyak Native lands that will be cut.

Why sell what is considered

"priceless" for a loss? Once Columbia Helicopter and ITT/Rayonier level all the prime old growth around Eyak Lake, Eyak River and Power Creek, and take their share of the profits (Columbia: 50 percent and ITT/Rayonier: 30 percent), then Sherstone and the Eyak

Corp. will split the remaining profit (20 percent), to pay their management and past debt.

This equation doesn't reflect potential city sales tax (6 percent), or potential dividends, if there are any, for the shareholders who own this land and timber.

The other part of the story that goes unspoken by the Eyak Corp. or Sherstone is, once the logging is done

and the trees are lying on the forest floor, it is then that the Eyak Corp. board of directors will allow the shareholders to vote on the sale of their land, because the board of directors have once again offered our Native land to be purchased "fee simple title" to the Trustee Council and in the name of "restoration," but only after it's cut. This is not in the best

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interest of the public or the best use of the public monies (restoration settlement), let alone in the best interest of Eyak Corp. shareholders.

If one could review the Eyak Corp.'s books, it would reveal that the Eyak Rainforest has more value standing than lying on the ground. In the last eight years of clearcut logging operations, only \$3,000 have been paid in (supposedly) logging revenues, (\$1500 in '89; \$1000 in '90; \$500 in '91). When compared to protecting the 1994 Orca Narrows "timber rights only" sale to the Trustee Council for \$3.45 million, this transaction yielded two dividend checks totalling \$3,560. This "timber rights only" settlement also paid the way to the \$1.5 million out-of-court settlement with Sound Development. The 1993 \$15,000 net operating loss (NOL) dividend is not a logging revenue. The reality is, we as shareholders have made more money by protecting our forests than in eight years of clear-cut logging.

The Eyak Corp.'s board of directors won't allow its shareholders the right to vote on these critical decisions which continue to render irreparable consequences of corporate assets and their way of life.

The 1971, Alaska Native Claims Settlement Act (ANCSA), gave Alaska's Native people the inherent right to vote on how their Native corporate assets were to be managed (ie., money, land and timber). The shareholders need to demand an immediate "special shareholders" meeting with voting powers and vote to halt

the liquidation of their corporate assets, by the current board of directors of Sherstone and the Eyak Corp., and also allow (a first time ever), vote of the shareholders to decide between logging and a potential Trustee Council settlement, to protect their remaining rainforest equity and assets. The environmental community, along with the public and the Cordova city council, must request that the Trustee Council back off "fee simple acquisition" of our ANCSA lands and aggressively pursue a "comprehensive timber rights only" protection plan on Eyak Native lands. Eyak Lake, Eyak River and Power Creek's intact existence are critical to the fragile balance of this region.

Prior to the 1880s, over a quarter million sockeye returned to Eyak Lake (to spawn in fresh water). The water was so clear you could drink it. This region is also a popular recreational area for many Cordova residents and tourists, as well as an important city watershed. Because of its cultural significance to the "true" Eyak Indian people (subsistence, village, burial and ceremonial sites), it is for many of us considered "priceless" and "not for sale." It is also quite obvious that the wisdom has left many of our leaders; it would be foolish to jeopardize the intrinsic public interest value of this sensitive region.

So, in closing, I offer a resolution (a modern-day treaty), to be considered by all. It is ultimately up to us to protect our home; if not for us, our children and their children (some will have to set aside this personal gain).

Not often does an opportunity of this magnitude and importance cross our paths. Together, side by side and as one, we can work to protect and preserve rather than try to restore what has been destroyed.

We, the people, must ask the city council to hold an immediate "town meeting" and bring in the state agencies, and allow public testimony. (We must) also ask that the city council support a resolution directed towards the Trustee Council to protect Eyak Lake, Eyak River and Power Creek in its current intact state.

The City of Cordova could also show its commitment to protect our watershed by waiving any potential sales tax, restoration bonds, archeology surveys and environmental and economic impact statements to the Eyak Corp. and Sherstone, for its decision to protect our land and forests. If the Eyak Corp. chooses to level the forests, including the buffer zones, then it is only appropriate and necessary to demand sales tax or restoration bonds, archeology surveys and environmental and economic impact statements to mitigate the damages that are inevitable if logging commences.

Your voice can effect the outcome of this issue. This is our last chance to protect Eyak Lake, Eyak River and Power Creek. Call city hall (424-6200), and request a town meeting. Call or write the Trustee Council (278-8012; 645 G Street, Anchorage, Alaska, 99501), and the Eyak Corp. (424-7161; P.O. Box 340, Cordova, Alaska, 99574), and let them know how you feel.

Let's not let this opportunity escape us, like our trees will, if we can't work it out together and soon.

Glen E. "Dune" Lankard Jr., is a shareholder of the Eyak Corp., a tribal member and spokesperson of the Eyak Traditional Elders Council and the founder of the Eyak Rainforest Preservation Fund in Cordova.