

AUGUST 13, 1998

MOTION

FY 99 RESTORATION RESERVE PAYMENT

MOVE the Trustee Council approve the transfer of \$12,000,000 from the CRIS – Liquidity Account to the Exxon Valdez Oil Spill Settlement Account, CRIS – Reserve Fund. In the event the transfer is not completed by September 15, 1998, interest against these funds shall also be transferred. Interest shall be accrued from September 15, 1998, until the time of transfer from the CRIS – Liquidity Account. Interest shall be calculated at a rate of 5%. These funds shall be invested pursuant to the investment policy for the Reserve Fund. The Executive Director shall certify when the funds are available for transfer and the applicable investment policy approved by the Trustee Council.

Pink Salmon

Research and Monitor the Toxic Effects of Oil

- ➔ Complete 191A--oil-related embryo mortality
- ➔ Complete 329--synthesis of toxicological impacts
- ➔ Start 476--effects of oil incubation on reproduction

Provide Management Information

- ➔ Complete 188--otolith thermal mass marking
- ➔ Continue 190--genetic linkage map for pink salmon genome (part at ASLC)
- ➔ Complete 196--genetic stock structure
- ➔ Start 366--remote video monitoring of escapement
- ➔ Start 367--synthesis and publications related to straying (and other topics)

Supplement Populations

- ➔ Continue 139A2--Port Dick spawning channel

Pacific Herring

Investigate Causes of the Crash

- ➔ Start 162a & b--publications on herring disease
- ➔ Start 328--synthesis and publication on disease and toxicological studies
- ➔ Start 462--effects of disease on population recovery

Provide Management Information

- ➔ Start 468--estimations of acoustic target strength (limited start up funds provided in FY 98)

Investigate Ecological Factors

- ➔ Continue 311--productivity dependencies: stable isotopes
- ➔ Start 375--effects of egg distribution and ecology

Sound Ecosystem Assessment (SEA) and Related Projects

Investigate Ecological Factors

- ➔ Complete 320--sound ecosystem assessment (SEA)
- ➔ Complete 320M--observational oceanography
- ➔ Complete 320N--acoustic assessments
- ➔ Continue 340--long-term oceanographic monitoring

Develop Monitoring Technique

- ➔ Continue 195--pristine monitoring in mussels
- ⇒ Defer 393--food webs: structure and change

Cutthroat Trout, Dolly Varden, Rockfish & Pollock

Research and Monitor Populations

- ➔ Complete 145--cutthroat trout and Dolly Varden anadromous/resident forms

Supplement Populations

- ➔ Complete 043B--cutthroat trout and Dolly Varden habitat improvement monitoring

Provide Management Information

- ➔ Continue 252--genetic investigations of rockfish and pollock (at ASLC)

Marine Mammals

Research and Monitor Populations

- ➡ Continue 012--killer whale investigation
- ➡ Continue 064--harbor seal monitoring, habitat, and trophics
- ➡ Continue 341--health and diet (at ASLC)
- ➡ Start 371--harbor seal metabolism/stable isotopes (at ASLC)
- ➡ Start 441--harbor seal diet: lipid metabolism and health (at ASLC)

Nearshore Ecosystem

Research Mechanisms Limiting Recovery

- ➔ Complete 025--nearshore vertebrate predators (NVP)
- ➔ Continue 290--hydrocarbon database
- ➔ Continue 348--response of river otters to oil contamination (at ASLC)
- ⇒ Defer 379--assessment of risk of residual oil using P450
- ⇒ Defer 432--effects of oil on high cockscomb (at ASLC)

Research and Monitor Recovery

- ➔ Start 090--oiled mussel bed monitoring
- ⇒ Defer 289--status of black oystercatchers
- ➔ Continue 325--intertidal/subtidal manuscript preparation
- ➔ Start 423--population change in nearshore vertebrate predators
- ⇒ Defer 459--residual oiling of armored beaches/GOA
- ⇒ Defer 466--Barrow's goldeneye recovery status
- ⇒ Defer 480--status of black oystercatchers

Seabird/Forage Fish and Related Projects

Research Mechanisms Limiting Recovery

- ➔ Continue 163--Alaska predator ecosystem experiment (APEX)
- ➔ Continue 169--genetics of murres, guillemots, and murrelets
- ➔ Continue 306--sand lance ecology
- ➔ Continue 327--pigeon guillemot research (at ASLC)
- ➔ Continue 338--adult murre/kittiwake survival
- ➔ Continue 346--sand lance publication
- ➔ Continue 347--fatty acid profile/lipid class analysis
- ➔ Start 479--effects of food stress

Research and Monitor Populations

- ➔ Continue 144A--common murre population monitoring
- ➔ Continue 159--marine bird surveys
- ⇒ Defer 434--East Amatuli video link

Archaeological Resources

Monitoring

- ➔ Continue 007A--archaeological index site monitoring

Restoration and Protection

- ➔ Closeout 149--archaeological site stewardship

Subsistence

Enhance or Replace Injured Resources

- ➔ Complete 127--Tatitlek coho release
- ⇒ Defer 131--Chugach region clam restoration (w/interim funding)
- ➔ Continue 225--Port Graham pink salmon
- ➔ Continue 247--Kametolook River coho salmon
- ➔ Continue 256B--Solf Lake sockeye stocking
- ⇒ Defer 263--Port Graham stream improvements
- ⇒ Defer 405--Port Graham hatchery (outside Work Plan)
- ⇒ Defer 444--community-based harbor seal research

Enhance or Replace Lost or Reduced Services

- ➔ Continue 273--surf scoter life history and ecology
- ⇒ Defer 401--spot shrimp population

Increase Involvement of Subsistence Users

- ➔ Continue 052A--community involvement
- ➔ Continue/defer 052B--traditional ecological knowledge
- ➔ Continue 210--youth area watch (include lower Cook Inlet proposal, 99410)
- ➔ Continue 245--community harbor seal sampling

Reduction of Marine Pollution

Reducing Community Wastes

- ➡ Continue 304--Kodiak waste management plan (outside Work Plan)
- ➡ Start 514--lower Cook Inlet waste management plan

Habitat Improvement

Protect and Restore

- ➡ Continue 180-Kenai habitat restoration
- ➡ Start 314--Homer Mariner Park
- ➡ Continue 339--Human use and wildlife disturbance model in western PWS

Ecosystem Synthesis

Develop Models of Research Results

- ➡ Continue 330--mass-balance model of trophic fluxes

Integrate and Synthesize Project Results

- ➡ Start 278--Kachemak Bay ecological characterization
- ➡ Continue 300--synthesis of scientific findings
- ⇒ Defer 360--guidance for future EVOS activities
- ➡ Start 368--environmentally sensitive areas: summary maps (for PWS)
- ➡ Start/defer 391--Cook Inlet database
- ⇒ Defer 455--investigation of data system for long-term monitoring

Administration, Science Management, and Public Information

Disseminate Information to the Public

- ➡ Start 470--10th-year symposium and related items

Reevaluate and Update Injury Assessments

- ➡ Start 471--update status of services

Project Management

- ➡ Continue 250--project management

SPREADSHEET C
EXECUTIVE DIRECTOR'S RECOMMENDATION: FY 99 WORK PLAN
CHANGES FROM AUGUST 5, 1998 DRAFT

Pink Salmon Cluster

99190 / Linkage Map for Pink Salmon Genome	Change to FUND from FUND CONTINGENT *
99367 / Fisheries Research Synthesis & Publication	Contingent on revised DPD only; revised budget received

SEA and Related Projects Cluster

99320 / Sound Ecosystem Assessment	Change FY 00 recommendation to blank
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Other Fish Cluster

99252 / Rockfish and Walleye Pollock Genetics	Change to FUND CONTINGENT from DEFER*
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Seabird Cluster

99144A / Common Murre Population Monitoring	Add FY 00 recommendation of \$23.0
99327 / Pigeon Guillemot Restoration Research	Increase FY 99 recommendation from \$163.5 to \$166.1
99479 / Effects of Food Stress	Change to FUND from FUND CONTINGENT *

Subsistence Cluster

99127 / Tatitlek Coho Salmon Release	Contingency now includes 2 late reports (96127 & 97127)
99245 / Harbor Seal Biosampling	Change to FUND from FUND CONTINGENT; * add funding recommendation for FY 00 \$55.0, FY 01 \$40.0, FY 02 \$25.0
99263 / Port Graham Stream Enhancements	Change to DEFER from FUND CONTINGENT*

Outside Work Plan

99126 / Habitat Acquisition Support	Increase FY 99 recommendation from \$756.7 to \$770.4
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NEW FY 99 TOTALS

Work Plan:	Fund/Fund Contingent	\$ 9,928.1	(increase of \$193.0)
	Deferred	<u>\$ 1,749.7</u>	<u>(decrease of \$190.4)</u>
		\$11,677.8	(increase of \$2.6)
Outside Work Plan: Fund		\$17,900.7	(increase of \$13.7)

*Text of revised recommendation attached.

Projects Recommended as DEFER DECISION

The Executive Director's recommendation includes 17 DEFERRED or partially deferred projects; one would be funded outside of the Work Plan:

Proj. #	Project Title	Reason Deferred	Amount
99052B	TEK (fund \$24.7)	More information	\$21.4
99131	Clam restoration (fund \$83.4 interim)	FY 98 results	\$202.0
99263	Port Graham area stream enhancements	FY 98 results	\$42.1
99289	Black oystercatcher	FY 98 results	\$232.6
99360	Guidance for future research	Pending TC action on Reserve	\$194.4
99379	Risk to residual oil: P450	Lower priority	\$121.3
* 99391	Cook Inlet monitoring system	Pending completion of part 1	\$335.0
99393	Food webs: structure and change	Lower priority	\$125.0
99401	Spot shrimp	More information	\$70.1
99405	Port Graham hatchery (outside Work Plan; \$777.5)	More information; legal review	
99432	High cockscomb	Lower priority	\$69.3
99434	East Amatuli Island video	Lower priority	\$80.4
99444	Community harbor seal surveys	More information	\$69.2
99455	Data system: long-term monitoring	Pending TC action on Reserve	\$49.9
99459	Gulf of Alaska residual oiling	Lower priority	\$124.9
99466	Barrow's goldeneye status	Lower priority	\$12.1
99480	Black oystercatcher	FY 98 results	<u>See 99289</u>
TOTAL DEFERS			\$1,749.7

* A portion of this project's funding will be moved to the FUND category once a revised budget is received.

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
					Revised Request				
99190	Construction of a Linkage Map for the Pink Salmon Genome	F. Allendorf/Univ. Montana	ADFG	Cont'd 4th yr. 5 yr. project	\$212.1	\$212.1	\$187.3	\$0.0	\$399.4
<div> <div> <p><u>Project Abstract</u></p> <p>This project will complete a genetic linkage map for pink salmon in FY 98. The first primary aspect of the project in FY 99 is to add additional markers, consolidate linkage groups using gene-centromere mapping, and add additional anchor loci. The second primary aspect is to continue experiments at the Alaska SeaLife Center that use the linkage map to test for organismal effects of regions of the genome on phenotypes that affect traits that are important to recovery of pink salmon (e.g., growth and disease resistance). The project also will test whether there are regions of the genome that are affected by natural selection resulting in differential marine survival of individuals with different genotypes.</p> </div> <div> <p><u>Chief Scientist's Recommendation</u></p> <p>This is a forward-looking and scientifically sophisticated project by a talented principal investigator and his team. The objective of the project is to construct a genetic linkage map for pink salmon. The project was successfully reviewed in FY 98. The emphasis in FY 99 will be on mapping traits that are of potential adaptive significance to pink salmon, such as run timing and temperature tolerance. Fund.</p> </div> <div> <p><u>Executive Director's Recommendation</u></p> <p>Fund revised Detailed Project Description, which focuses on mapping traits that are of potential adaptive significance to pink salmon. This project, which is being conducted in part at the Alaska SeaLife Center, is designed to improve understanding of genetic variation in pink salmon and how such variation relates to marine survival, run timing, size, and other traits that are important from the standpoint of salmon restoration, management, and harvest. [NOTE: Funding includes \$24,800 for Alaska SeaLife Center bench fees.]</p> </div> </div>									

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
					Revised Request				
99245	Community-Based Harbor Seal Management and Biological Sampling	J. Fall/ADFG, M. Riedel/Alaska Harbor Seal Commission	ADFG	New 1st yr. 4 yr. project	\$70.7	\$70.7	\$55.0	\$40.0	\$190.7
<u>Project Abstract</u>		<u>Chief Scientist's Recommendation</u>		<u>Executive Director's Recommendation</u>					
This project will continue the harbor seal biological sample collection program begun under Project /244. The program was initiated in FY 96 and expanded in FY 97 in Prince William Sound, lower Cook Inlet, and Kodiak Island. FY 98 was scheduled to be Project /244's close-out year. Under the biosampling program, village-based technicians are selected by the Alaska Native Harbor Seal Commission and trained by the Alaska Department of Fish and Game to collect samples. The samples are transported to Anchorage or Kodiak for further sampling and distribution to participating scientists for analysis. Under Project 99245, the Alaska Native Harbor Seal Commission will also organize a two-day workshop, and produce and distribute a newsletter with summaries of the biological sampling program.		This project has been a highly successful effort to obtain harbor seal tissue samples through the efforts of subsistence hunters, with participation by students in the Youth Area Watch. The samples obtained have been useful to harbor seal researchers. In addition, the educational work and the involvement and active cooperation with community residents will undoubtedly benefit harbor seals over the long term. The draft final report on the pilot project (/244) indicates there has been progress with respect to management of the growing tissue database. There has been less progress in development of a long-range funding plan. My recommendation is to fully fund this project in FY 99 and to phase out funding over a two-to-three year period.		Fund full request in FY 99. Funding will be reduced in subsequent years to reflect transition of the project to other funding sources. This project will enable the Alaska Native Harbor Seal Commission to continue its biological sample collection program for harbor seals in Prince William Sound, lower Cook Inlet, and the Kodiak area. These samples are provided to ongoing EVOS projects which seek to explain why harbor seals are not recovering.					

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99 Revised Request	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
99252	Investigations of Genetically Important Conservation Units of Rockfish and Walleye Pollock	J. Seeb, L. Seeb/ADFG	ADFG	Cont'd 2nd yr. 5 yr. project	\$232.5	\$232.5			\$232.5
	<u>Project Abstract</u> This project will consolidate an array of requests from the commercial fisheries industry for discrete stock research into a single proposal for work that the Alaska Department of Fish and Game will conduct at its Anchorage genetics laboratory. Also, the Alaska Department of Fish and Game proposes to develop experimental fish runs at the Alaska SeaLife Center; these are essential for study of genetics, physiology, or diseases of anadromous fish proposed by University of Montana, University of Alaska, or the Alaska Department of Fish and Game and other principal investigators seeking to conduct research at the Seward facility.	<u>Chief Scientist's Recommendation</u> This project was funded in FY 98 recognizing that measures of possible genetic differences within fish stocks are an important starting point for a better understanding of population genetics and, eventually, how to best manage the fishery to protect genetic diversity. Although preliminary work is underway on rockfish and pollock, the proposal for FY 99 work needs to be strengthened. It is recommended that the project be funded contingent on receipt of a revised proposal that is favorably reviewed. The revised proposal should address (1) the relationship among any genetically important "units" and the production and health of the population in the Gulf of Alaska, (2) more interpretation of the recent and expanding literature on microsatellites and population structure in fishes relative to the goals and methods for this proeject, (3) elaboration of reasonable and testable hypotheses, (4) <u>specifically</u> how the results of this study might be incorporated into better management of these species, and (5) other reviewer comments as will be outlined in a letter to follow.	<u>Executive Director's Recommendation</u> Fund contingent on submittal and approval of a revised Detailed Project Description that addresses the Chief Scientist's concerns. This project is just getting underway in FY 98 at the Alaska SeaLife Center, and it will explore genetic stock structures of rockfish and pollock in the Gulf of Alaska. Rockfish were injured by the oil spill, and a pollock fishery has developed in Prince William Sound to replace other lost fishing opportunities. [NOTE: Funding includes \$32,500 for Alaska SeaLife Center bench fees.]						

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99 Revised Request	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
99263	Assessment, Protection and Enhancement of Salmon Streams in Lower Cook Inlet	W. Meganack, Jr./Port Graham Corporation	ADFG	Cont'd 3rd yr. 4 yr. project	\$42.1	\$42.1	\$23.5	\$0.0	\$65.6
<u>Project Abstract</u>		<u>Chief Scientist's Recommendation</u>		<u>Executive Director's Recommendation</u>					
This project will replace lost subsistence services by constructing enhancement projects on two of the major salmon streams in the lower Cook Inlet spill area. Port Graham Corporation management, with advice from an Alaska Department of Fish and Game fisheries specialist, will supervise the project and coordinate with a professional fisheries scientist and resource consultants. Local subsistence users will be employed as technical assistants during the field survey and during construction of the habitat improvement structures. In FY 98, two projects are being implemented: construction of a fish pass on the Port Graham River and a rearing pond on Windy Creek Left. In FY 99, the success of these two projects will be monitored and vegetation will be planted around the rearing ponds.		This project's objective depends on successful completion of permitting, design, and construction in FY 98. If it meets its FY 98 objectives, it is appropriate to monitor results. However, no new instream construction and enhancement projects should be undertaken other than planting vegetation around existing nursery ponds. Defer until FY 98 work is complete.		Defer decision pending satisfactory completion of FY 98 construction of stream improvements. If funded, funding will include new objective to plant vegetation around the rearing ponds on Windy Creek Left. The goal of this project is to protect and enhance salmon streams important to the restoration of subsistence in the Port Graham area. FY 98 funding was provided in two phases: Phase 1 (NEPA, permitting, engineering/design) is currently underway; Phase 2 (construction) will be authorized upon the completion of Phase 1.					

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
					Revised Request				
99479	Effects of Food Stress on Survival and Reproductive Performance of Seabirds	J. Platt/USGS-BRD, A. Kitaysky/Univ. of Washington	DOI	New 1st yr. 4 yr. project	\$84.7	\$84.7	\$125.2	\$129.6	\$414.5
<u>Project Abstract</u>		<u>Chief Scientist's Recommendation</u>		<u>Executive Director's Recommendation</u>					
This project will measure the rise in blood levels of stress hormones such as corticosterone in response to a standardized stressor: capture, handling and restraint. This well-known response (found throughout vertebrates from fish to mammals) provides a strong assessment of whether or not a free-living population is chronically stressed or, if baseline levels of corticosterone appear normal, the stress-induced increase in corticosterone indicates potential for stress. This "field endocrinology" approach provides exact information on current stress status and the potential for stress in relation to quality and abundance of food. The project will investigate seabirds breeding in lower Cook Inlet and also use captive birds for controlled experiments.		The original proposal was not viewed as a priority for funding, but corticosterone data that became available this summer from experimental and pilot studies in lower Cook Inlet indicates that blood concentrations of corticosterone in both murre and black-legged kittiwakes can reflect food stress. It may be possible, therefore, to estimate food stress in seabird colonies in future studies of the northern Gulf of Alaska. The possible cost efficiencies over establishing long-term field camps to track food availability in nesting seabirds are potentially very significant. Fund.		Fund revised Detailed Project Description, which deletes Alaska SeaLife Center component in FY 99. This project will explore the use of corticosterone, a biochemical indicator of stress, as a tool to monitor seabird populations. This project will supplement data on food limitations being gathered in the APEX project (/163) and may lead to development of an effective and efficient monitoring technique.					

**RESOLUTION OF THE
EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL**

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

1. Afognak Joint Venture ("AJV"), owns the surface estate of lands located on Afognak Island, Alaska, as described in the Resolution adopted by the Trustee Council at its meeting on April 2, 1998 ("Resolution") at Attachment A to the Resolution and depicted on the map at Attachment B to the Resolution (the "Lands").

2. The Lands are within the oil spill area as defined by the Council in the Final Restoration Plan approved November 2, 1994.

3. Pursuant to the Resolution the Council authorized the expenditure of seventy million five hundred thousand dollars (\$70,500,000) plus an additional adjustment for the deferred payments in funding towards the purchase by the State and the United States.

THEREFORE, we resolve to provide seventy million five hundred thousand dollars (\$70,500,000) plus an additional adjustment for the deferred payments in funding towards the purchase by the State and the United States for the Lands as follows: (i) the amount to be paid at the first closing shall be twenty-eight million dollars (\$28,000,000); (ii) the amount to be paid at the second closing, on or after October 1, 1999, shall be twenty million five hundred thousand dollars (\$20,500,000) plus an additional amount to be calculated by multiplying two million one hundred ninety three thousand dollars (\$2,193,000) by the number of days between the first closing and the second closing divided by three hundred sixty five (365); and (iii) the amount to be paid at the third closing, on or after October 1, 2000, shall be twenty two million dollars (\$22,000,000) plus

an additional amount to be calculated by multiplying one million one hundred thirty-five thousand two hundred dollars (\$1,135,200) by the number of days between the second closing and the third closing. These amounts are based on the above-described acquisition of the Lands, consisting of approximately 41,750 acres, more or less, as described in the Resolution at Attachment A to the April 2, 1998 Resolution and depicted on the map at Attachment B to the Resolution.

This authorization for funding is subject to the inclusion of the following terms and conditions in any implementing purchase agreement with AJV:

(a) receipt by the United States District Court for the District of Alaska (District Court) of any necessary settlement payments due from Exxon Corporation, et al. and the subsequent disbursement of these funds by the District Court for this purpose;

(b) AJV shall grant to the United States or the State, respectively, at no additional cost a conservation easement similar to that used in other acquisitions funded by the Council which will enable the United States or the State to enforce on a non-exclusive basis the restoration objectives of this acquisition. The form and substance of this easement and the related warranty deed for the State or the United States must also be satisfactory to the Alaska Department of Law and the United States Department of Justice;

(c) AJV shall grant to the United States or the State, as requested by the United States or the State at the time of the first closing and at no additional cost a temporary conservation easement on the portion of the Lands to be conveyed in the second and third closings precluding development and the harvest of timber (except on those lands where the harvest of timber is allowed pursuant to the Resolution) and similar to that used in other acquisitions funded by the Council which will enable the United States or the State to enforce on a non-exclusive basis the restoration

objectives of this acquisition. The form and substance of this easement must also be satisfactory to the Alaska Department of Law and the United States Department of Justice;

(d) completion of a title search and review, and any required surveys, said surveys to be paid for by AJV, all of which must be satisfactory to the United States and the State for the respective interests in the Lands acquired by each government;

(e) no development or timber harvesting is to take place on the Lands prior to closing except that timber harvesting may take place on the portion of the Lands within parcel AJV 3a identified for timber harvesting;

(f) completion of a hazardous materials survey satisfactory to the State and the United States;

(g) an adjustment to the Lands to be acquired and the price to be paid may be made, subject to approval by the Executive Director of the Trustee Council ("Executive Director"), to allow AJV to convey title to an approximately 28 acre inholding to Roy and Shannon Randall, who currently hold a permit for operation of a wilderness lodge at the site, so long as a conservation easement on the 28 acres is conveyed to the State and/or the United States. The form and substance of this easement must also be satisfactory to the Executive Director, the Alaska Department of Law, and the United States Department of Justice;

(h) compliance with the National Environmental Policy Act and other provisions of applicable federal and state law.

By unanimous consent and upon execution of the purchase agreement(s) and written notice from the State of Alaska, the United States, and the Executive Director of the EVOS Restoration Program that the terms and conditions set forth herein and in the purchase agreement 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 from the District Court Registry account the sum of \$28,000,000 to be paid at the time of initial closing, \$20,500,000 and an additional sum that represents an adjustment, based on the initial date of closing at an annualized rate of 5.16% of the outstanding balance to be paid at the second closing on or after October 1, 1999, and \$22,000,000 and an additional sum that represents an adjustment, based on the date of the second closing at an annualized rate of 5.16% of the outstanding balance to be paid at the third closing on or after October 1, 2000. These amounts represent the only amounts due under this resolution to AJV from the EVOS joint settlement funds in the District Court Registry and no additional amounts are herein authorized to be paid to AJV from such joint funds.

APPROVED by the Council at its meeting of August 13, 1998, held in Anchorage and Juneau, Alaska, as affirmed by our signatures affixed below:

JAMES A. WOLFE
Regional Forester Trustee Representative
Alaska Region
USDA Forest Service

BRUCE M. BOTELHO
Attorney General
State of Alaska

DEBORAH L. WILLIAMS
Special Assistant to the
Secretary for Alaska
Department of the Interior

STEVEN PENNOYER
Director, Alaska Region
National Marine
Fisheries Service

FRANK RUE
Commissioner
Alaska Department of
Fish and Game

MICHELE BROWN
Commissioner
Alaska Department of
Environmental Conservation

WILD PLACES

By Roger D. Stone ♦ Photos by Daniel J. Cox



ALASKA'S Emerald Isles

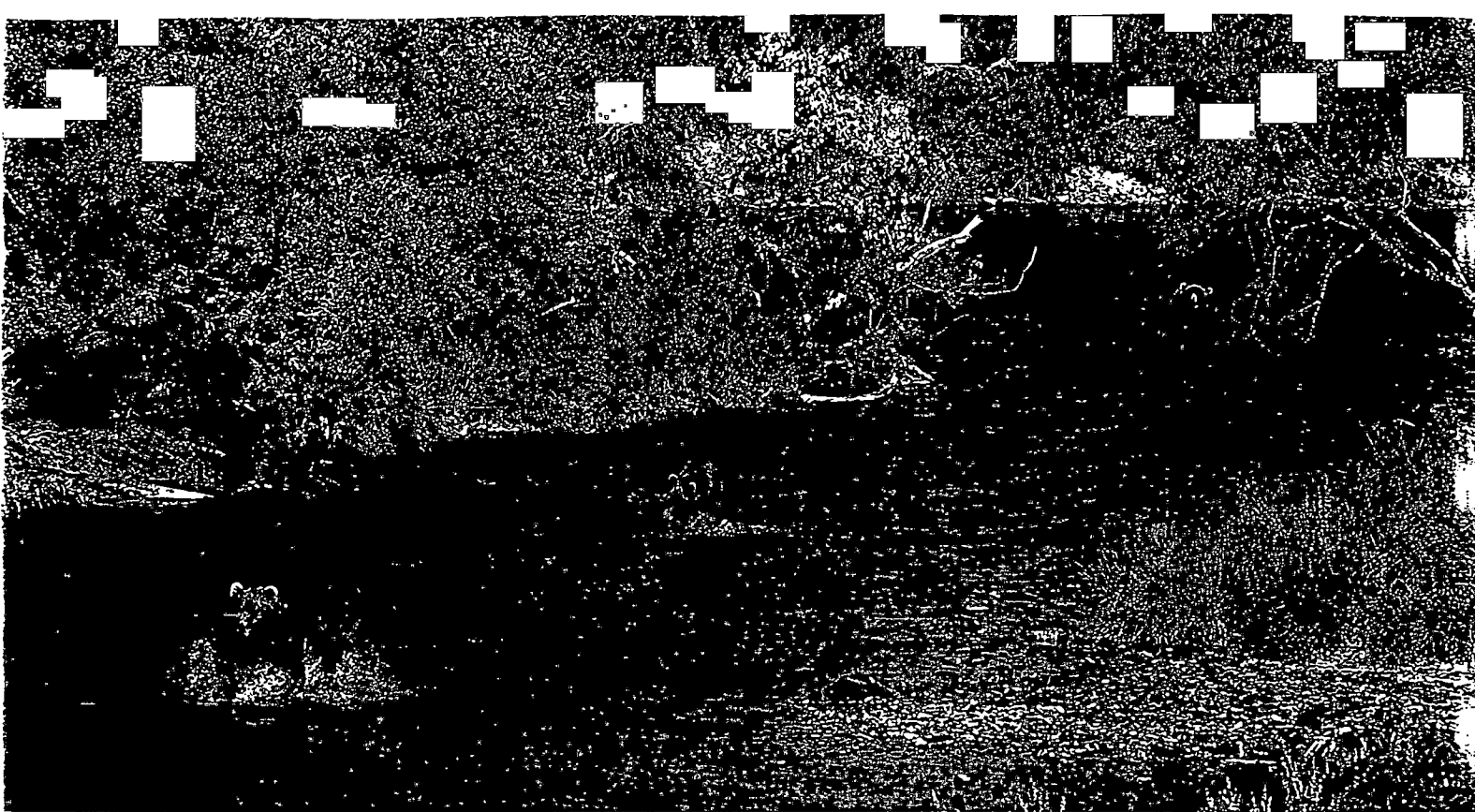
*An uncommon
wilderness experience*

DALL'S PORPOISES SURFED OUR BOW WAVES, THEIR BOLD WHITE undersides glinting in the blue-green seas. To the west, the snowcapped peaks and glaciers of Alaska's Katmai coast loomed on the horizon. As we turned east toward the Kodiak archipelago, clusters of lazing sea otters stirred from their belly-up positions to peer at our swift 24-foot inboard cruiser. Twenty minutes later we reached anchorage at Bluefox Bay on Afognak Island, second largest island in the Kodiak chain.

For the next several days, installed in a log cabin on Bluefox Bay, I relished the American north at its summer best. By day, the sun sparkled on the water; during brief nights, a full moon bathed the summit of Red Peak.

In equally brilliant weather six years before, I had circumnavigated Afog-

nak's neighbor, Kodiak Island, in a 44-foot sailboat. Now, guided by Kodiak natives Jeff Peterson and Ralph Eluska, and accompanied by two enthusiastic outsiders—Tim Richardson of Washington, D.C., and Arkansas outdoors writer Gregg Patterson—I had returned to the Kodiak archipelago for another



FISH PATROL: Out to land some salmon, brown bears head down a river on Kodiak Island.

refuge, including many of the places where bears gather to fish for salmon. Until recently, it was all too likely that the native owners would consign much of this land to development (see "Hard Times . . . Hard Choices," September/October 1991).

The problem stemmed from the flawed, if well intended, 1971 Alaska Native Claims Settlement Act, the purpose of which was to liberate natives from welfare dependency. The law established native-run corporations, which were authorized to claim choice lands within the refuge, and granted federal dollars to launch fishery, timber, and mineral-development ventures. Few of these initiatives succeeded, and by the late 1980s, the Kodiak and Afognak corporations were left with little but their land. Desperate for cash, their choice was bleak: develop the land or sell it.

In hopes of prodding the government or philanthropists to fork over money for the sake of conservation, the corporations began waving red flags. When no buyers surfaced, aggressive development was the only option. Near the village of Larsen Bay on Kodiak, ten-acre lots were advertised, and native leaders weighed offering similar lots

along the Karluk River leading to Karluk Lake—land that refuge manager Jay Bellinger characterizes as "the finest bear habitat in the world."

"The Kodiak Island land rush has begun," announced the *Kodiak Daily Mirror* in 1992. The island's borough assembly approved all development proposals, no matter how harmful to the hunting and wilderness values that the natives, at heart, wanted to uphold. When prices soared for old-growth Sitka spruce in the early 1990s, native corporations owning land on Afognak began aggressively clear-cutting.

Then came the *Exxon Valdez*. Of the \$1 billion in fines that the Exxon company paid to compensate for the damage inflicted on the region, about one-third has been allocated for land acquisition. Of this windfall, \$169,700,000 has been disbursed, all but \$40 million to native corporations, to conserve 278,900 acres within or adjacent to the Kodiak refuge. Native corporation members receive regular dividends from land-sale proceeds, which they have invested in securities. With 80 percent of the native corporation-held land within the refuge bought back, the land rush is history. The bear and its habitat are mostly secure, and negotiations to protect the rest of the native-owned land are in progress.

Emil Christiansen, president of the Old Harbor Native Corporation, says, "It's no bonanza. But it's what we need and deserve." Adds Tim Richardson, who advises the native corporations on land sales and public relations matters, "If you count acquisitions elsewhere in Alaska as well as the Kodiak purchases, the people of the United States should get two and a half Yellowstones out of the Valdez oil spill."

Not all is well. Some of the Kodiak natives would prefer to take the cash in a lump payment rather than follow their leaders' advice, which would allow future generations to benefit from the land agreements. Kodiak's fishing industry is in trouble. Canneries have closed. The king crab fishery is defunct, and wild salmon prices range so low that often it hardly pays the fleet to leave the harbor. Overall, the native village economies remain shaky. But at least for visitor-gearred entrepreneurs, prospects have turned positive. With their wildlife now well protected and their panoramic vistas unblemished by the haphazard development that threatened, the Kodiak archipelago's green and wild islands are a prime ecotourist destination.

◆
Roger Stone is president of the Sustainable Development Institute in Washington, D.C.

visit. I wanted to find out more about the improved outlook for the archipelago's abundant wildlife, especially its king-size brown bear, and for its thousand or so Alutiiq natives, in the wake of new land deals made with federal and state authorities.

Afognak Island is lush with green meadows and Sitka spruce forests carpeted with springy moss. Here, live Roosevelt elk and black-tailed Sitka deer, introduced in the 1920s to benefit hunters but thriving. Thriving here, too, is the Kodiak brown bear, a larger cousin of the grizzly found only on these islands. The bears feed so well on spawning salmon, they grow to be the world's largest land carnivore. A male in his prime can stand 12 feet tall and weigh 1,400 pounds.

Fishing and nature watching filled the long northern days. Each morning we boarded Jeff's *Refuge Rock* for excursions that lasted far into the twilight. We trolled for silver (coho) salmon in the Shelikof Strait and cast flies to catch pink (humpback) salmon that congregate around the mouths of rivers during the summertime spawning season. One evening I watched a river otter carry off the remains of a fish we had filleted for a midnight dinner.

The inspiring scenery continued when Jeff and I cruised the waters of his home village of Old Harbor, on the little-visited south end of Kodiak Island. Harbor seals basked and barked on outlying rocky ledges. Kittiwakes danced on the water's surface. Thousands of horned and tufted puffins, murres, and jaegers swam in the cold waters, dove for fish, and wheeled around the small islands they nest on during the short summer. Two-Headed Island yielded a colony of more than 100 ponderous Steller's sea lions. Most of the Kodiak bears were still up in the high meadows feeding on juicy red salmonberries, but we did spot several bears on the pebble beaches.

Ashore at Old Harbor, I visited the Russian Orthodox church, stark-white with blue trim, a reminder that Alaska was a Russian possession from 1784 to

1867. I hiked through velvet meadows—bear country—for an arresting view of the blue glacier towering over the town and a flock of mountain goats grazing on a steep slope. A day trip along Kodiak Island's rugged east coast, riding the long Pacific swells in the Gulf of Alaska, brought us to bustling Kodiak City, home to a major fishing fleet and most of the archipelago's 14,000 people.

Kodiak Island is also home to some 2,500 bears. Everybody here has a bear story and it is a place to experience wilderness. Yet, not so long ago, the threat of checkerboard development loomed. Ironically, the 1989 *Exxon Valdez* oil spill averted this outcome.

The story begins with the mighty bears. Hunted by natives for their meat and pelts, they came under added pressure from twentieth-century settlers. Cattlemen shot them to protect their herds. Fishermen killed them to use their meat to bait their crab pots.

For the sake of the bears, President Franklin D. Roosevelt signed a bill in 1941 establishing 1.9 million acres of bear habitat—including about two-thirds of Kodiak Island and a slice of Afognak—as a national wildlife refuge. Loopholes, however, allowed construction along a one-mile strip of shoreline and enabled native Alaskans to own some 25 percent of the land within the

Time and Place

JULY AND AUGUST are the peak months for traveling to the Kodiak archipelago. Hikers prefer May and June, before Kodiak Island's summer grasses reach waist or chest height. Fishers and hunters like spring and fall.

From Anchorage, Alaska Airways (telephone 800-426-0333) flies to Kodiak City. To reach the native villages, take Pen Air's scheduled mail planes; telephone 800-448-4226. Arrange with floatplane operators for trips to remote locations.

On Kodiak Island, the Buskin River Inn (telephone 907-487-2700), at the airport, is a good jumping-off point. In the town of Old Harbor, the Sirkalidak Lodge (telephone 907-286-9246) is a good choice. The Kodiak Native Tourism Association (telephone 888-288-5736) can provide guides, lodgings, and a variety of wilderness experiences. The Kodiak National Wildlife Refuge (1390 Buskin River Road, Kodiak, AK 99615; telephone 907-487-2600) operates a public-use cabin at Bluefox Bay and seven others in out-of-the-way places. For summer bookings, sign up for lotteries held every April 1 and July 1 (cancellations create openings if you don't win a lottery slot). The Afognak Wilderness Lodge (Seal Bay, AK 99697; telephone 800-478-6442) offers high-end comfort in superb surroundings.

If you want to arrange for a guide, Jeff Peterson can be reached at Peterson's Adventures, P.O. Box 141, Old Harbor, AK 99643; telephone 907-286-2252. Jeff and his deep-keel *Refuge Rock* are just right for two to five people. First Frontier Adventures (P.O. Box 137, Old Harbor, AK 99643; telephone 907-286-2244) can handle larger groups aboard a sturdy 53-foot charter boat that sleeps 14.

—R. D. Stone



NATURE LOOMS: At rest, a Kodiak brown bear and her two fast-growing cubs (opposite); at work, a river otter tears into a trout (right).

AN ALASKAN PARADISE REGAINED

Prince William Sound has largely recovered from the Valdez oil spill, and Seward has opened a world-class sea life center



Visitors crowd the rail of a tour boat in Prince William Sound, Alaska's inland sea, where eco-tourism is booming.

Ken Graham/Ken Graham Agency

By TIMOTHY EGAN

I WAS in Alaska almost a decade ago when a ship nearly three times the length of a football field went aground, spilling 11 million gallons of crude oil into the Eden of Prince William Sound. Day 1 was shock and trauma. Day 2 disbelief. By the third day, fishermen who would never so much as wince if their hands were pierced by grappling hooks were crying like infants. Alaska's beloved inland sea, with all its otters and whales, puffins and bald eagles, was thought to be mortally wounded.

So it was heartening this summer to return to the scene of one of the nation's worst environmental disasters — the largest oil spill in North American history — and see not only that the fecund life of Prince William Sound seemed to be coming back, but that an ever resourceful Alaska seaport had fashioned something lasting and monumental from the disaster.

In the months after the 1989 spill, as oil spread more than 600 miles from the rupture point near Valdez, the town of Seward served as a triage base for the thousands of dying marine mammals and birds. It was a gold rush camp for "spillores," as those who made a killing off the cleanup were called, and not a pretty sight. An army of people scrubbed oil from rocks, while others brought in fresh casualties: majestic, feisty birds or otters tarred and poisoned by most of them died slow, painful deaths.

Now Seward is jumping, but in a different way. The town, 130 miles from Anchorage on the southern shore of the Kenai Peninsula, has just opened the Alaska Sea Life Center, which the organizers say is the Western Hemisphere's foremost cold-water research and rehabilitation center for marine wildlife. The 115,000-square-foot facility cost \$56 million to build, much of it from money paid by Exxon after a court settlement. State officials expect the center to rival Denali National Park as the No. 1 tourism site in Alaska within a few years, drawing upward of 300,000 visitors a year.

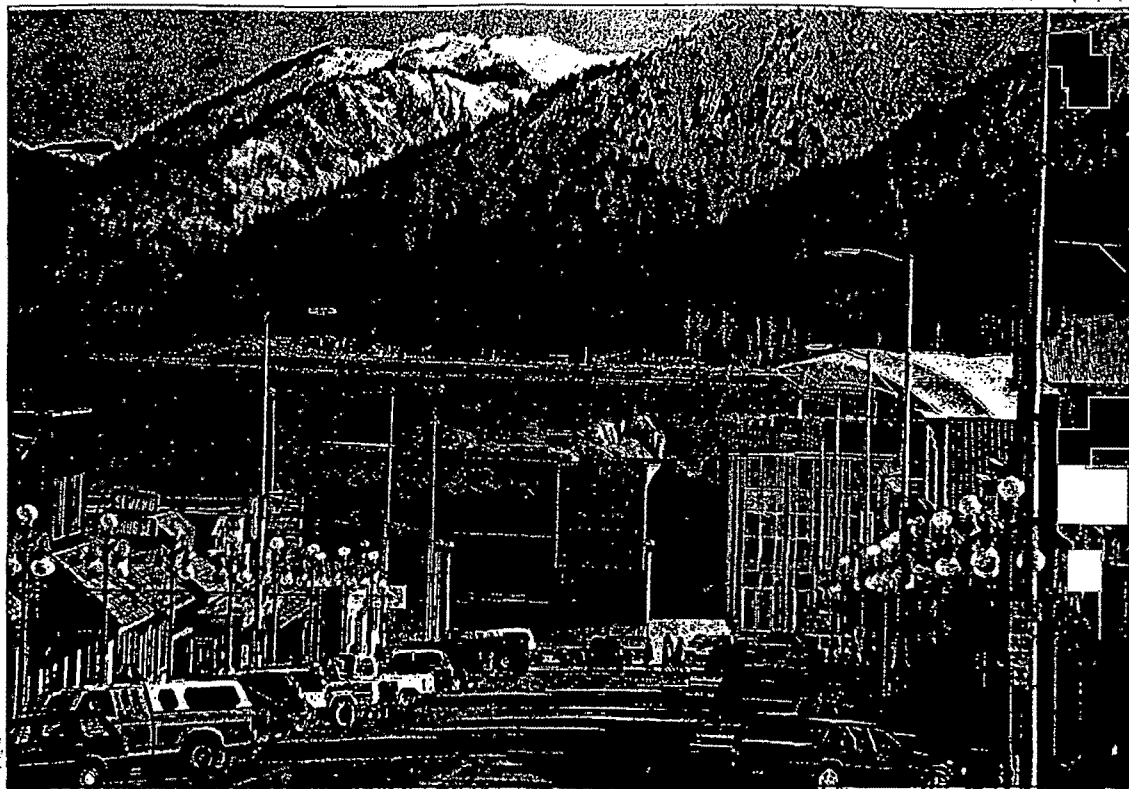
The center is a world-class hospital for marine mammals or birds in peril. But of equal import for the visitor, it is an enormous window on the world of the north Pacific and all its inlets — a place to watch many of the odd wonders and daily habits of everything from king crabs to sea lions to salmon, which return to spawn in a little waterway just next to the center.

At the same time, Seward has become a bustling base for excursions: by kayak, cruise ship or tour boat into Prince William Sound and the neighboring Kenai Fjords National Park. Eco-tourism has brought unimaginable prosperity to this town of 3,000 people.

A half-day at the sea life center watching sea otters fuss or puffins dive, followed by at least a half-day on the sound observing those creatures in their larger habitat is enough to leave anyone with some understanding of why Jacques Cousteau could get so worked up over the most complex ecosystem on earth.

Seward is an easy two-and-a-half-hour drive from Anchorage on one of Alaska's most scenic highways (it is a redundancy, of course, to call any highway in Alaska scenic). The road ends when you run out of land, on the shores of Resurrection Bay. Seward is home port to what may be the world's largest halibut fleet, and Sewardites are crazed about the big, goofy-looking fish. Halibut charters still make up much of the town's lifeblood. At the end of town, latched to rock at the base of mountains that rise steeply from shore, is the new sea life center. In the way of new buildings in the north that attempt to capture as much light

TIMOTHY EGAN is the chief of the Seattle bureau of The Times.



Ken Graham/Ken Graham Agency

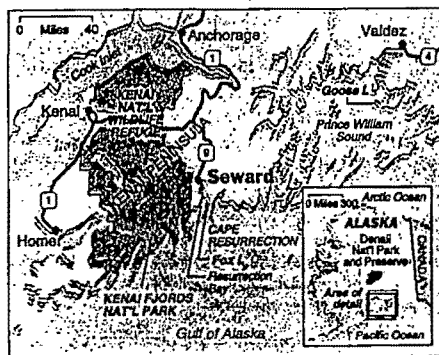
ABOVE The Alaska Sea Life Center is at the end of Main Street in Seward. BELOW LEFT A 277.3-pound halibut. BELOW RIGHT The boat harbor on Resurrection Bay. The Kenai Mountains are in the background.



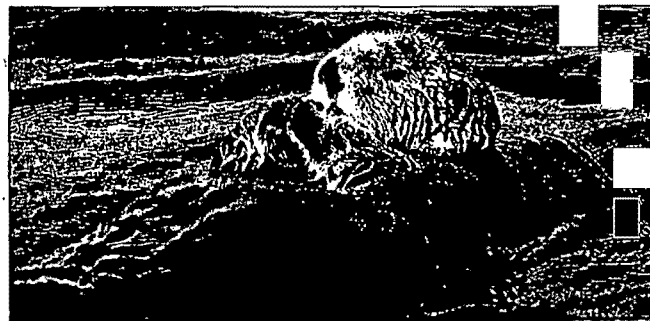
Evelyn Erickson/Ken Graham Agency



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The New York Times



Glen Oliver/Ken Graham Agency

A sea otter lolling about in Prince William Sound.

Paradise Regained

as possible, the center seems airy and skylighted, even in the below ground rooms with their large windows to the sea. When I was there, not long after the solstice, it seemed so luminescent with shimmer glow that there was no need for electric light.

Most aquariums and saltwater theme parks are set up for entertainment. Orcas frolic on cue, penguins waddle for fish, and sea lions bark for their dinners. Not so at the sea life center. It is meant to draw people into the natural world of the sea, to engage them in a way Disney has never attempted. It is a nonprofit center, but they are selling the ocean. Still, while eschewing theme park shtick, the sea life center delivers its share of scientific exposition in an entertaining manner.

For example, consider halibut — an ugly fish that can weigh up to 500 pounds or more. It feels like a tire at the end of a fishing line. The meat, if fresh, is as good as lobster. A halibut, which is a flounder, has two eyes on one side, no eye on the other. One of the first tanks in the sea life center provides an answer for this anomaly: at a young age, a halibut starts to live on its side, at which point the eye facing down will migrate to join the eye facing out. There is halibut in mid-eye transition in the tank. After I'd spent a few minutes with him, fish and chips took on new meaning.

An entire room in the sea life center is devoted to the oil spill. The exhibit tends to stick with the facts, with minimal preachiness. The immortal words of Joseph Hazelwood, captain of the Exxon Valdez, are highlighted: "We've fetched up hard aground north of Goose Island off Bligh Reef, and evidently leaking some oil." The oil would contaminate more than 1,500 miles of shoreline, kill in excess of 250,000 seabirds, 2,000 sea otters, 300 harbor seals and 250 bald eagles. Its full effect, particularly on the dwindling population of Steller sea lions, may not be known for years.

SEA otters, frisky and bewhiskered, constantly fluffing up their thick fur to stay warm, became symbols of what oil could do to a pristine body of water and its inhabitants. And otters are likely to be one of the main draws at the sea life center. Once they were nearly extinct, hunted by Russians and the Aleut natives they enslaved.

They have made a strong comeback, though their numbers are down considerably since the spill. From the outdoor deck of the center, you can usually see otters floating on their backs in the bay below, grooming, and consuming large quantities of shellfish. If you linger long enough outside, you may also see Dall's porpoises or even humpback whales, both of which cruise the deep waters of the bay looking for prey.

Inside, down below, are the main attractions: several large, glass-walled tanks with sea lions, harbor seals and a variety of birds. These are creatures that, for the most part, have already grown used to life around humans, and after being cared for are unable to return to the wild. They live in rookeries designed to be like their natural habitats or in dark, deep-water hollows. The harbor seals, sleek-looking with tiny ears, are quite playful, and move like torpedoes through the water. A good-sized octopus, a wolf eel and king crabs occupy other tanks.

But the most fascinating, perhaps, are the seabirds. They use their wings like the collapsing sides of the Batmobile; divebombing from the air, they convert the wings to paddling purpose to swim deep in search of shellfish.

In the evening I took a cruise in search of sea life beyond Resurrection Bay. Most Seward-based tour boats head southwest, for up-close views of glaciers breaking apart in Kenai Fjords National Park. We went the other way, on a double-tiered tour

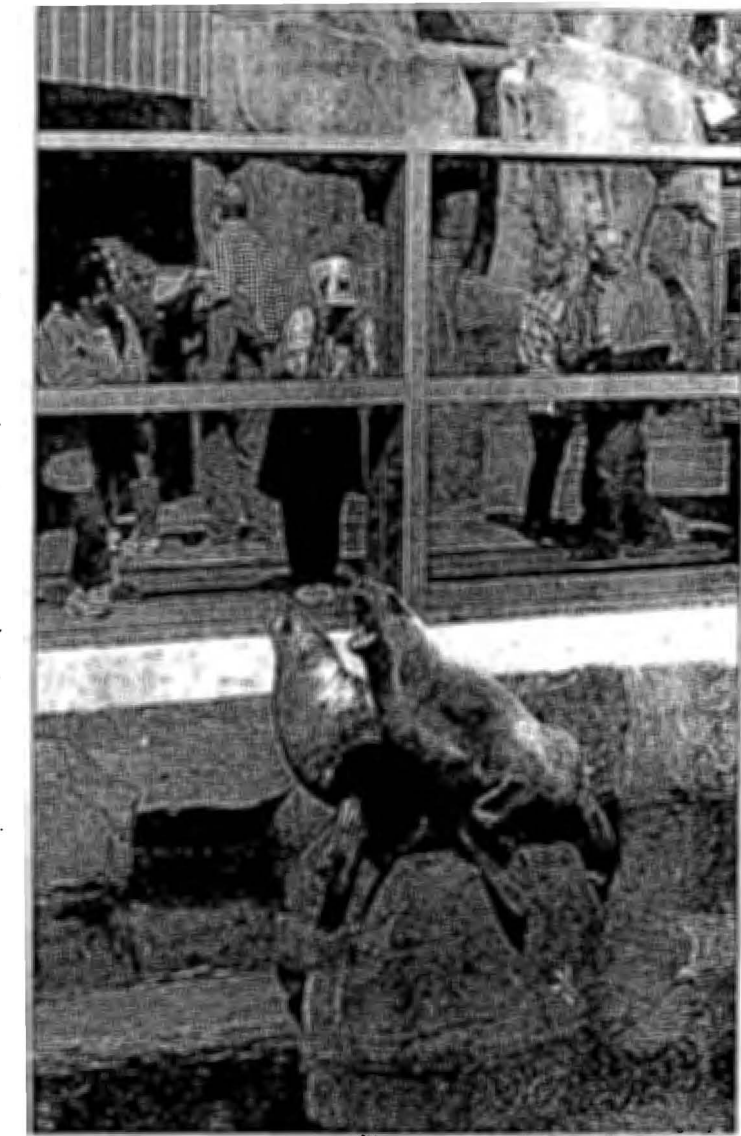
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boat holding about 60 people, to Prince William Sound. At Fox Island we stopped for a salmon bake, cooked in native style over alder wood, inside a lodge on an island with no electricity. Fox Island is a favorite place for kayakers who want to overnight at one of the small cabins. Then it was out beyond Cape Resurrection to islands packed with birds and animals. It was the time of year when Steller sea lions haul out on rocks for a mating ritual that makes 19th-century Mormon patriarchs seem celibate by comparison. The bulls, some weighing up to a ton, with manes that make them look like lions, will herd about 10 females on a rock, then keep them there for days, mounting them at will. They also guard them from other males. We passed several rocks jutting from the sea, each a place of fierce and polygamous lovemaking. Elsewhere the young bachelors, as they are called, have their own rock hangouts, where they lounge and dream of growing old and promiscuous.

Steller sea lions are disappearing, though, and their status is so uncertain that the Government has taken steps to place them under the protection of the Endangered Species Act. Research at the sea life center in Seward could prove to be the difference in whether mating displays like the one I saw will continue to be part of this cold, green section of the world.

The seabird rookeries were equally energetic. Puffins with rainbow-colored beaks dove between thousands of black-legged kittiwakes, murres, auklets and cormorants. A single rock island was packed so tight with birds it was like Yankee Stadium in the midst of pennant fever — minus the boo birds, of course. An eagle attacking a kittiwake nest was quite entertaining, as the smaller birds massed and squawked in an effort to distract the silver-headed raptor.

Away from the birds, the recent geology of the area provided other diversions. The 1964 earthquake, a 9.2 on the Richter scale, was the largest ever recorded in North America. It remade Alaska, destroying several small towns in the process. Around Seward, parts of the coastline slipped into the sea. The land dropped about six feet on average in the islands off Seward. Bluffs



Steller sea lions at the Alaska Sealife Center.

became beaches and beaches became ocean floors. What you see now in parts of the sound and around the Kenai Peninsula are ghost forests, the gray trees that were plunged down so deep that their roots reached salt water. Thus they are frozen, perfectly preserved, like Lot's wife. The ghost forests, with their new flat beaches, are wonderful places for kayakers to camp.

On the return to Seward, the high,

glacier-bound peaks held the sun until nearly midnight. The deep crevasses and walls of ice, usually blue in midday, took on the pink blush of Alaskan summer sunsets. I saw black bears rambling through meadows, eagles everywhere, even a snow-white goat perched a high cliff. We were followed into port by a pair of sea otters and by fishermen exhausted by a day of reeling in halibut. They were not crying. ■

Tether to Anchorage tugs at Whittier's isolationism

By Timothy Egan

Commentary

WHITTIER — On rare days when the clouds lift, it is still hard to see why anyone would want to live in this toenail of a port at the foot of a glacier on Prince William Sound. It rains more than 15 feet a year — and snows another 10 — and the town has the sort of why-bother feel that is common to places where snow will soon cover whatever rusted appliance has been left to the elements.

But when the train departs, leaving Whittier alone at the edge of the world, it is evident why 250 or so people have chosen to live in a bombproof tower in a town that is an asterisk in World War II history. Bordered by mountains on three sides and the sea on the other, Whittier is that rare American town with no road connecting it to the rest of the world.

"People move here to get away from people," said Don Grande, who has lived in Whittier for two years. "But that's not going to be the case anymore."

As Grande spoke, bulldozers and tunnel-boring machines, cranes with bridge parts and trucks loaded with gravel growled a few miles away, clawing an expensive road to Whittier.

Many people here say they do not want the road, but it is favored by the tourism industry and Alaska's powerful Congressional delegation. So state and federal taxpayers are spending \$70 million to build about five miles of road to a town that got along without one for 50 years.

When the road is opened in two years, connecting Whittier to the main highway running to Anchorage, state officials expect 1.4 million people a year to use it. And then Whittier, a town with one public restroom and no gas station, will be, perhaps, not unlike any other dot on the map.

"Right now, we are so hidden here that if you turned out the harbor lights you couldn't find us," said

Carrie Williams, the city manager, a title that is perhaps overblown for a burg that is little more than a harbor and a 14-story apartment tower built to take a hit by Japanese bombers.

Whittier was a creation of the United States Army in World War II. The military was looking for an ice-free, year-round port close to Anchorage but largely hidden from view. Whittier became a staging area for the fierce fighting that eventually took place on the Aleutian Islands, the only part of the United States to experience ground battles in the war.

The army built two towers to house men whose needs did not run to high esthetics and then it blasted a path for a railroad track through the mountains, over wetlands and on to Anchorage, about 45 miles away. One tower has been abandoned; it sits gray and odd-looking against the gravel and scruffy alder bushes at the edge of town.

The other tower houses most of the residents of Whittier, as well as City Hall, a country store, a travel

agency and a church. Its three-foot-thick concrete walls withstood the 1964 earthquake — the strongest ever recorded in North America — which sent tsunamis that destroyed other towns on Prince William Sound.

The entire town looks something like a space colony on a planet where it never stops raining.

Once, Whittier had a peak population of more than a thousand. When the Army pulled out in 1960, however, the town nearly died. It has been revived by tourists, who stop here on ferry runs, or take off from here in kayaks to explore the myriad wonders of Prince William Sound.

But above all, Whittier has had splendid isolation, a commodity that has considerable value in Alaska, a big land with few roads.

Throughout the state, there are passionate struggles raging over plans to build roads in places where none exist. To the southwest, a plan supported by Alaska's Congressional delegation would punch a road through a protected wilderness in the Izembek National Wildlife Refuge. The road would cost an estimated \$40 million and if approved it would be the first time Congress had authorized a road into an area designated as wilderness. Supporters say the road is needed to provide emergency access to two villages on the outskirts of the refuge.

To the south, another road is planned across the biggest wetland on the West Coast, the estuary of the Copper River Delta. Fishermen, who rely on prodigious salmon runs on the Copper for a catch that has become world famous, have been staging protests in opposition to the road. But supporters, led by Rep. Don Young, Republican of Alaska, say the road is needed for loggers who plan to cut down a large section of trees in the area.

And a third road, which is planned for the nearly six million acres of Denali National Park and

Preserve, is being promoted by Sen. Frank H. Murkowski, Republican of Alaska. Park officials say the money could be better spent elsewhere.

But the road to Whittier is beyond the theoretical stage. It will give residents of Anchorage, the home to half the population of Alaska, a quick route to boat moorage on Prince William Sound.

The people who live here through the gloom and the clouds, the dark and the isolation, do not seem to welcome the change, although the town council is on record as favoring the road.

"I'm worried it's going to pollute our salmon run," said Donna Lagod, who operates an espresso stand near the railroad tracks. The train comes to Whittier several times a day.

"A lot of people are worried about losing our privacy," said Lagod, who was dressed in beach clothes on a day when it was raining and the temperature was 50 degrees. "But they've been putting in all this fiber-optic cable, and that's pretty much taken our privacy right there anyway."

A resident of Whittier for 10 years, Tim Esmonde, is concerned about the impact of all those people, RV's and campers backed up at a place that has but one, nearly invisible, hotel.

"Prince William Sound is finally getting fixed from the Exxon Valdez oil spill and now you're going to put all these people here with nowhere to go," Esmonde said.

The city manager, Ms. Williams, says there is no use fretting about the lost Whittier way of life.

"It's coming, and change is going to be radical," she said. "We might as well try our best to get ready for it. Sometimes, God forbid, you get what you asked for."

This editorial appeared in the July 14, 1998, issue of The New York Times. It is reprinted here by permission. Copyright ©1998 by The New York Times. Reprinted by permission.

Educate yourself, plan for the future

My name is Max Cragun and I am a long time Cordovan. My dad was Jack Dunlap and my mom is Chris Dunlap (Miss Chris). I have been a fisher-person for almost all my life and have been devastated by the effects of the oil spill and clear-cut logging, not just the effects on the fish and the environment, but on the people as well.

I think that for a lot of us long-time Cordovans, it was the first time we had to realize that we were subject to entities that had so much influence over our sheltered existence. They had a lot of money to make it seem that everything was going to be OK at first. They bought our silence and our power. There really was no reason to investigate the long-term effects this would have on us because, for then, we were taken care of.

Now the people feel disempowered and that they don't have the right to stand up to big money corporations, and state and federal governments. It is a helpless and hopeless feeling.

Many of us have been so numbed by the experience that we don't even flinch as they road over our last intact wild-stock fisheries in the name of creating short-term jobs for a few.

The whole project is kept out of view as much as possible with extra effort to circumvent due public process. Many of us would like to trust that the state is looking out for

our environmental public interests, but at the same time the government is supposed to be overseeing the construction, the Alaska Congressional delegation is entering into legislation a proposal to widen the easement and restrict public access.

I don't understand why the Alaska delegation is supporting a road for timber when there is no market. It is as if we can't learn a lesson from the rotting log rafts in Nelson Bay. If this road project really is such a good idea then why has it been kept from the public on all levels? The Forest Service signed an M.O.U. without public process, the Alaska delegation attached their house bill to the appropriations bill as a rider, and the Native corporations just claim they don't have to share anything with us or offer any protection.

It would seem as if there must be another reason for this road besides coal and timber, but nobody wants to talk about that. As a community committed to Alaska's largest industry (fishing), I feel we have the right to know what we are giving up our sustainable lifestyles for. I really can't blame the outside forces for trying to suck this region dry, if there is no opposition. I wish I could extend the love I feel for this place to them for then they would realize that this place is more than resources; it is lives, lifestyles, cultures and children.

The destruction of some of my personal sacred places has brought about a need to educate myself. With education has come a greater understanding of how everything is connected and the effects we have on our future.

This place and lifestyle is still more intact than the place and lifestyles in most other communi-

ties and is worth standing up and shouting for.

Now I just want to work our way through this unsustainable destruction of our home and I would like to see jobs created toward a sustainable future.

We still have a chance to make a living model of a sustainable community out of Cordova. I urge Cordovans to think about the children's future. What will be left for them? What will be their jobs? What will be their connection to this lovely place? Then I urge you to educate yourselves on the issues surrounding our future and to speak out and empower yourself. We will make mistakes, but it is a part of learning. We must shape our future with love and respect.

Max Cragun

Earth renews itself

Is man really a parasite and each its host as Cliff Nichols says? Is man the destroyer of Nature as Dune Lankard implies? Do Europeans understand Alaska's environmental challenges better than Alaskans as Rikki Ott thinks? Is our rainforest as delicate as Weaverling, Grimes, Steiner, Mykland, et al, all say it is?

Is it possible to not see a forest through the trees? I believe this to be the case to all of the above. Is it possible for man to actually improve upon Mother Nature? Was transplanting deer to Prince William Sound, moose to the Copper River Delta, or elk to Kodiak a waste of time? Are fish hatcheries a bad idea? Or the fish ladder in Boswell Bay? Should man have built the weir on Eyak Lake? Or the dike at Mile 7? Or hundreds of nesting islands on the Delta?

Will a road to Carbon Mt. really ruin the fish habitat? Has the Copper River Highway/railroad ruined the fish habitat? Does a bridge hamper spawning salmon? Has Cordova, Eyak Lake shoreline, Nirvana Park, recovered from the effects of overlogging during the railroad days? Is logging a renewable resource?

All it takes to answer these simple questions is to open our eyes, but you too, like the above mentioned, may have trouble finding the answers because one cannot see a thing without first opening one's mind!

Dave Werner

Letters to the editor

Researchers discover ties between freshwater, sea-run cutthroat trout

By Jody Seitz

Cutthroat trout surviving in the streams and lakes in the Prince William Sound region are the northern-most members of this species. As with other species at the limit of their range, these trout are likely to be more sensitive to changes in their environment, whether natural or from human activity.

After the T/V Exxon Valdez accident nine years ago, spilled oil eventually coated beaches at the mouths of trout streams throughout the western Sound. The Alaska Department of Fish and Game determined that the oil might have caused injuries to both Dolly Varden and cutthroat trout.

The Exxon Valdez Oil Spill Trustee Council was interested in developing a recovery program for the fish, but first researchers needed to learn more about the trout. Two forms of cutthroat trout live in the Sound. Resident trout spend their entire lives in freshwater, usually in lakes at the heads of streams. Anadromous cutthroat trout spend

the first two to three years of their lives in freshwater before migrating downstream to saltwater. Then they'll make several forays back and forth between the saltwater and their home streams.

In 1996, Dr. Gordon Reeves, research biologist with the U.S. Forest Service Pacific Northwest Research Station in Corvallis, Ore., began a project to find out the genetic relationships among the two types of trout and the sea-run trout of neighboring streams. Until this research, no one knew the relationship between resident and anadromous trout.

While assessing injuries from the oil spill, biologists learned the locations of many trout streams. But, when this study began, biologists had to walk stream after stream to find enough of the fish to study. They found cutthroat in streams which they weren't thought to inhabit; other streams held too few trout for any to be taken for research.

After two years, Reeves found that it was unlikely that anadromous trout from one stream would repopulate the streams polluted by oil. Sea-run cutthroat trout do not stray and are more distinct genetically than most other species of salmon.

"There's very little interaction among the populations as far as we can tell, from the genetic perspective," said Reeves. "The populations of cutthroat in the Sound contain a high amount of rather unique information. If you look at other (salmonid) fishes, coho, sockeye or chinook, there's unique information, but it's much lower compared to the cutthroat trout."

Reeves' analysis shows recovery could occur in another, perhaps surprising way. It turns out that freshwater dwelling cutthroat can produce trout that run to the ocean. "The resident parent can give rise to or produce anadromous individuals," said Reeves. "And so in some cases, where you have depressed stocks, it may be that recovery is going to come from this other life history form that provides not just resident fish, but anadromous fish."

For restoration, this largely indicates a path of caution with regard to this species. All that may be possible is to regulate the harvest, protect the habitat, and leave the trout alone.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Exxon verdict stands

Jury tampering claim rejected

By NATALIE PHILLIPS
Daily News reporter

A federal court judge on Friday rejected another of Exxon's bids for a new trial in the company's ongoing effort to overturn a \$5 billion verdict for damage done in the 1989 oil spill in Prince William Sound.

Exxon claimed that some jurors who returned the verdict four years ago were coerced by a court security guard who acted inappropriately. The guard attended a July Fourth picnic with jurors. He also pulled one juror aside during deliberations and showed him a bullet and his gun, suggesting that a hold-out juror be "put out of her misery."

In his 27-page ruling, U.S. District Judge H. Russel Holland wrote that the guard's "socializing with jurors was reprehensible but not coercive." His actions "did not affect the verdict."

Holland also found that the memory of Rita Wilson, one of the 11 jurors who returned the verdict, is "not credible" and the story she recently told the court during a deposition is "shocking and bizarre."

It's the second time Holland has denied Exxon's request for a new trial. The first request was denied in 1995.

When the jury returned the record verdict in fall 1994, Exxon vowed to fight the decision all the way to the U.S. Supreme Court. It appealed

the verdict, but that was put on hold while Holland considered the company's request for a new trial. The ruling Friday means the appeal will go forward. Exxon officials said they will add Holland's most recent decision to their list of appeal questions.

"Exxon continues to believe that there is ample evidence of improper communication with the jury," company officials said in a prepared statement after Friday's ruling.

Plaintiffs' attorney Brian O'Neill said, "This is just another way of Exxon trying to put off judgment."

The jury tampering allegations first surfaced in 1995 when one juror, Doug Graham, said during a deposition that security guard Donald Warrick had stopped him one morning during the 4½-month trial and asked him whether the jury was still having problems with one particular juror. Graham told the court that Warrick "pulled his gun out, took a bullet out and said, 'Maybe if you put her out of her misery or something.'"

Warrick was subpoenaed and denied under oath that the incident happened.

In his first ruling denying the oil company a new trial, Holland wrote that it couldn't be determined whether the gun incident occurred.

Two years later, Exxon learned that Warrick had admitted to his employer, the U.S. Marshal Service, that the incident happened and that he had lied in court, according to court records. Warrick was forced to resign from his position. He died four months later, in the spring of 1995.

With Warrick's admission, Exxon filed another petition asking for a new trial. Exxon also asked to take the deposition of juror Rita Wilson, the only juror who was not questioned during the 1995 hearing for the new trial. She wasn't questioned then because she was emotionally distraught from the stress of the trial. This spring, Holland ruled that Wilson should be questioned.

During her deposition, taken in March, Wilson began to tremble and weep. She then surprised the attorneys and Holland by alleging that Warrick had intimidated her with his gun, that she knew about the incident with Graham, that she was threatened by one juror and that she was told during jury deliberations that Warrick and all the jurors except two wanted her "killed."

Holland was perplexed by what Wilson said. He found it not credible because there was no other evidence to support it and because it was the first time the allegations came up, even though there had been other opportunities for her concerns to be raised.

"The court is convinced that Mrs. Wilson believes what she has said," Holland wrote. "However, her present memories do not reflect what really happened."

Wilson could not be reached for comment.

Wilson considered herself the hold-out juror during deliberations, Holland concluded, and she "now regrets having concurred in the verdict and (she) is expressing feeling of guilt for having given in."

He pointed out that when the verdict was returned and the jurors were polled in open court, all concurred with the verdict. In quoting a 1980 appellate court ruling, Holland wrote, "Once a verdict has been delivered and accepted in open court and the jury is polled and discharged, jurors may not claim that their assent was mistaken or unwilling."

Sea may not suit salmon

Experts debate ideas on cause of low runs

By TOM KIZZIA
Daily News reporter

Something was wrong with the king salmon on the Yukon River this year, and it wasn't just that there were so few of them.

In a summer with unexpectedly weak salmon runs across Alaska, the Yukon River saw the worst return since statehood. Beyond that, the few kings that made it back appeared battered by life at sea. Their bodies were unusually small compared with their head sizes, according to state biologists. Sea lampreys and a muscle fungus had attacked their flesh.

These were signs that stress from the marine environment — not foreign fleet interception or marine mammal predation — was responsible for the poor returns, said Tom Kron, a regional supervisor for the state Department of Fish and Game.

In much of Alaska, salmon runs have been nearly as bad. Cook Inlet got just half as many reds back as biologists expected. Bristol Bay had the worst run in two decades. Gov. Tony Knowles declared a disaster for Western Alaska last week and said the declaration might be extended.

In case after case, biologists are pointing out to sea, saying something in the ocean has changed.

"We've suspected this for a few years. We're in the midst of some kind of an ocean change," said Jack Helle, manager of the ocean carrying capacity program at Auke Bay for the National Marine Fisheries Service. "But everybody's looking for an easy answer, and I don't think there is one."

Scientists have been unable to agree whether Alaska's salmon runs are hurting because the ocean is getting too cold or because it's getting too warm.

The answer may be critical, because the duration of the current salmon decline could hang in the balance.

The cold-water theory, which links past cy-

■ GOOD NEWS:
State lifts restrictions on Kenai River sportfishing. B-1

Fishing boats on the Naknek River battle for sets last month during the first opening of the prime Bristol Bay season, which saw its worst run in 20 years. Scientists disagree on whether

Alaska salmon runs are hurting because the ocean is getting too cold or because it's getting too warm, but they do suspect that the answer lies in the ocean.



SALMON: Biologists look to ocean in effort to explain weak Alaska returns

Continued from Page A-1

cles of salmon abundance to fluctuations in sea temperatures, suggests the problem will get worse before it gets better.

Many researchers, including the state's chief fisheries scientist, say the declining runs appear to be tied to long-term atmospheric cycles in the North Pacific. In the 1980s, when water temperatures were warmer, salmon production rose to unprecedented highs in Alaska. But now the cycle may have started cooling, researchers say, and salmon abundance could be returning to the lower levels of the 1970s.

"It looks like we are entering a regime of lower productivity," said Doug Eggers, chief fisheries scientist for Fish and Game. "And if the past is any indication of the future, it looks like these periods are quite persistent."

But other scientists, including some at the University of Alaska Fairbanks, note that for the past two years temperatures in the Bering Sea and the Gulf of Alaska grew warmer, not colder. They attribute that to the short-term atmospheric influence of a powerful El Nino as well as global warming.

The scientists say the unusually warm water — not the long-term cooling trend — could be responsible for the recent run declines, as well as unprecedented plankton blooms and large-scale seabird die-offs.

In a disaster assessment for Western Alaska released last week, the state emphasized the warm-water concerns, comparing the "anomalous weather patterns" that reduced salmon catches to the droughts that won a federal disaster declaration this summer for Texas and Oklahoma.

Biologists have traditionally focused on environmental effects on young salmon. Paying attention to adult salmon at sea is relatively new, said Gordon Kruse, a Fish and Game biologist who prepared a briefing paper for the gover-

nor last week.

If the warm-water theorists are right, then the effects on salmon came late in their life spans. Did adult salmon wilt from the heat in the home-stretch of their return to Bristol Bay or veer away from their destinations?

Something like that could have happened, said Milo Adkison, a University of Alaska fisheries professor. In some ways, that would be good news, because the El Nino weather is over and runs presumably would recover. But Adkison is worried that long-term warming trends could someday displace entire salmon runs.

Cold-water theorists, on the other hand, say it's more likely the salmon were hurt by something earlier in their life cycle, before the recent El Nino sent the occasional albacore tuna north to Alaska. They say the recent warming is more likely a temporary reversal of the overall cooling trend.

"We've suspected for a few years that we're in the midst of some kind of an ocean change, but El Nino last year really put a smoke screen over the whole thing," Helle said.

But even the cold-water theorists agree that long-range warming trends will complicate reading the long-term cycles they've only recently begun to discern.

"There is a controversy. It's not confusion in the ranks; it's different points of view," said University of Alaska oceanographer Ted Cooney. "It will be resolved the way scientists resolve their differences, through further study."

The cold-water theory looks at a century of data on salmon abundance and measurements such as sea surface temperatures and sea level pressure. The North Pacific seems to shift between cold and warm trends on a cycle of 20 years or more, scientists say. The shifts seem tied to movements of a dominant low-pressure weather system known as

the Aleutian Low.

For reasons linked to poorly understood factors such as food and predation, colder water in the Bering Sea and the Gulf of Alaska — even by just a few degrees — means fewer Alaska salmon survive to return. The cycle works the other way at the southern end of the salmon's range, off California and the Pacific Northwest, where cold water helps salmon production and warm water reduces ocean survival.

Since the late 1970s, Alaska has been basking in a warm water trend, culminating in a record salmon harvest of 217 million fish in 1995 while the Pacific Northwest suffered. The warm water trend may have started shifting about 1990, they say, though it is too soon to say for certain. If the Pacific has entered a cooling cycle — scientists prefer the term "regime shift" because many factors other than water temperature are at work — the downward trend could be here awhile.

One model developed by Russian scientists, an index that matches salmon harvests and various atmospheric conditions this century, predicts the current decline won't bottom out until 2020, Helle said.

A look at past cycles may put the current disaster in Western Alaska in perspective, at least biologically.

In Bristol Bay, where the red catch peaked at 44 million fish in 1995, the harvest plummeted to 10 million this year. But at the bottom of the last cycle, Bristol Bay red catches ranged between 1 million and 5 million for much of the 1970s.

Statewide, the harvest of all salmon species bottomed out around 21 million in 1967, a far cry from the 110 million or more expected for this year.

Salmon production shouldn't sink so low this time around, state officials say. Improvements in fisheries management and understanding of spawning needs, together with closure of high-seas driftnet fisheries in the 1970s,

should help sustain Alaska's salmon harvests, they say.

Nevertheless, this year's harvest is disastrous, state officials say, because prices have not risen as they usually do in times of reduced catch. Economic troubles in Japan and competition from farmed salmon have kept prices low, they say. Compounding the problem is the debt that many fishermen took on buying permits and new boats during recent flush times.

Some runs in Alaska are still doing quite well, which puzzles researchers. In Kodiak, salmon runs are strong, while the Copper River produced its third-largest sockeye run ever. And healthy rivers are likely to experience periodic upswings even during an overall downward trend, biologists say. For example, Cook Inlet is expected to have good commercial fishing in 2001, even with poor ocean survival, because the parents of that run produced a bumper crop of salmon fry in the Kenai River.

The whole idea of ocean cycles is theoretical and not based on a lot of historical data, cautions University of Alaska oceanographer Tom Weingartner.

"It's intriguing, but I'd be real careful if I were a policymaker," he said.

Still, if the Pacific is entering a regime shift that brings colder water and fewer salmon to Alaska, there might be a few silver linings:

- Crab and shrimp fisheries in the Gulf of Alaska, which disappeared after the 1970s, could stage a comeback, said Fish and Game's Eggers.

- Smaller runs sometimes produce bigger individual fish, said Helle of the National Marine Fisheries Service. So even if there are fewer kings on the Kenai River, the odds may be better of someone finally catching that mythical 100-pound world record.

- And though it's not likely to warm the hearts of Alaska fishermen, cooler water could mean better fishing at last off the coast of California and the Pacific Northwest.

Prince William Sound Otter Study...**Oil-Fed Otters May Unravel Pollution Impact**

by Ned Rozell
Science Writer

When the Exxon Valdez ran into Bligh Reef in the spring of 1989, the most visible victims of the oil spill were blackened sea otters and shore birds. Now, nearly a decade later, scientists are still trying to sum up the effects of the oil spill.

In Seward, one researcher is trying to learn more about the spill by feeding small amounts of crude oil to river otters. Merav Ben-David, an ecologist who studies animal behavior and physiology at the University of Alaska Fairbanks' Institute of Arctic Biology, is performing research on river otters that began right after the spill.

In 1989, UAF Professor Terry Bowyer, a wildlife biologist at the Institute of Arctic Biology, Professor Larry Duffy, head of UAF's Chemistry and Biochemistry department, and technicians from the Alaska Department of Fish and Game began examining river otters in oiled and non-oiled areas.

The scientists chose to study river otters because the animals often live where the land meets the sea. River otters, seldom-seen members of the same family as mink and sea otters, den along bodies of water in the forests of Alaska. The animals, which grow to four feet long, hunt in rivers, the ocean, and sometimes on land. River otters on the coast catch much of their diet—fish, crabs and shrimp—from the sea.

Bowyer, Ben-David and graduate student Gail Blundell have studied river otters in Prince William Sound for the past three summers to look for lingering effects of the oil spill. Otters are notoriously hard animals to study—they are shy and too smart to come to a trap twice—so Blundell and Ben-David captured 15 river otters from different areas within Prince William Sound and brought them to the Seward Sea Life Center.

When river otters were first studied, right after the spill and the three years following, researchers found enzymes in the otters' blood indicating stress that could be caused by ingesting crude oil. Otters that lived near oil-fouled beaches showed high levels of the enzyme; otters in areas without oil showed much lower levels.

Today, the otters living near shores that were soaked by oil nine years ago are still showing elevated levels of the stress enzyme.

Though crude oil is no longer visible, otters may still be suffering from its effects. That's what Ben-David hopes to find out as she feeds crude oil to some of the otters at the Seward Sea Life Center.

Ben-David has a small metal jug of crude oil given to her by ARCO workers at Prudhoe Bay. She and assistant Olav Ormseth will fill tiny capsules with the oil, slip

the capsules inside herring, and feed the herring to the otters four times each week. Five otters will receive the heaviest dose of oil—1,000

parts per million, about the equivalent of a tablespoon of oil in five gallons of water. Five will get a dose ten times smaller, and five will ingest no oil whatsoever.

Ben-David said she is basing the highest dosage on oil levels found presently in blue mussels that live in Prince William Sound.

Ben-David and Ormseth will take blood samples from the otters every three weeks to

see if the crude oil is causing the stress enzymes to increase. Using underwater cameras, they will watch otters to see if their diving ability is impaired by the crude oil, which can cause anemia.

The researchers will continue feeding some oil to the otters for 100 days, Ben-David said. Then, she will stop feeding them oil for 100 days before she releases them in March 1999. By feeding a toxin to one of the cutest mammals in Alaska, Ben-David expects a bit of opposition.

She said feeding oil to otters is the next logical step in her study, a step that will

help determine how much oil spills affect living creatures, and for how long. "It's extremely important to validate those results we're getting out in the field," she said.

"These results will be very useful for future oil spill work. We can use the otters as a model for all marine mammals affected by oil."

(This column is provided as a public service by the Geophysical Institute, University of Alaska Fairbanks, in cooperation with the UAF research community. Ned Rozell is a science writer at the Institute.)



Rozell

Army Corps explains local cleanup projects

The United States Army Corps of Engineers will host an open house Thursday related to its Defense Environmental Restoration Program.

The open house, which takes place from 2-6 p.m. at the Safeway Plaza, is aimed at informing the public about restoration projects.

Members of the Corps' project team will be on hand to provide information on cleanup efforts at Buskin Beach, Woody Island, Long Island, Cape Chiniak Tracking Station and Little Navy Annex.

Team members will review the projects, and address related community questions and comments.

Interim removal actions at the five Kodiak sites address hazards,

such as underground storage tanks, visually contaminated soil, and unsafe structures. The action is intended to reduce the number of identified hazards, while full site closure plans are being finalized.

Part of the cleanup includes disposal of various items from the World War II military installation at Buskin Beach; Buskin Beach tar disposal between Buskin and Artillery hills north of the Buskin River, and removal of storage tanks on Woody Island.

The project also includes removal of items from Long Island, site of harbor defense installation Fort Tidball and removal of items from Cape Chiniak Tracking Station and Little Navy Annex.

PWS 1056: Blondeau Parcel

Acreage: 100	Rank: PMSC
Sponsor: ADNR	Appraised Value: \$626,800
Owner: Robert Wayne Blondeau	
Location: Within Valdez city limits, at the mouth of Mineral Creek.	

Parcel Description. The parcel lies at the mouth of Mineral Creek, a stream that runs into Port Valdez. Mineral Creek is an anadromous stream containing wild, spawning populations of sockeye and pink salmon. Bald eagles nest on the parcel. The eagles probably feed on the spawned-out salmon. The parcel abuts wetlands owned by the City of Valdez. The site is used for bird watching and sport fishing by local residents.

Restoration Benefits. Public ownership of this parcel will protect habitat for pink salmon, sockeye, and recreation/tourism by preventing the loss of wetlands to development. Acquisition of this parcel would establish beach access for the public. Currently, only the harbor and Allison Point provide public waterfront access. Recreation amenities afforded by this parcel include: bird and wildlife viewing, beachcombing, hiking, ADA access to the flats, fishing, kayak, canoe and small boat launching, picnicking and wild food gathering.

Key habitats and other attributes of this parcel include the following:

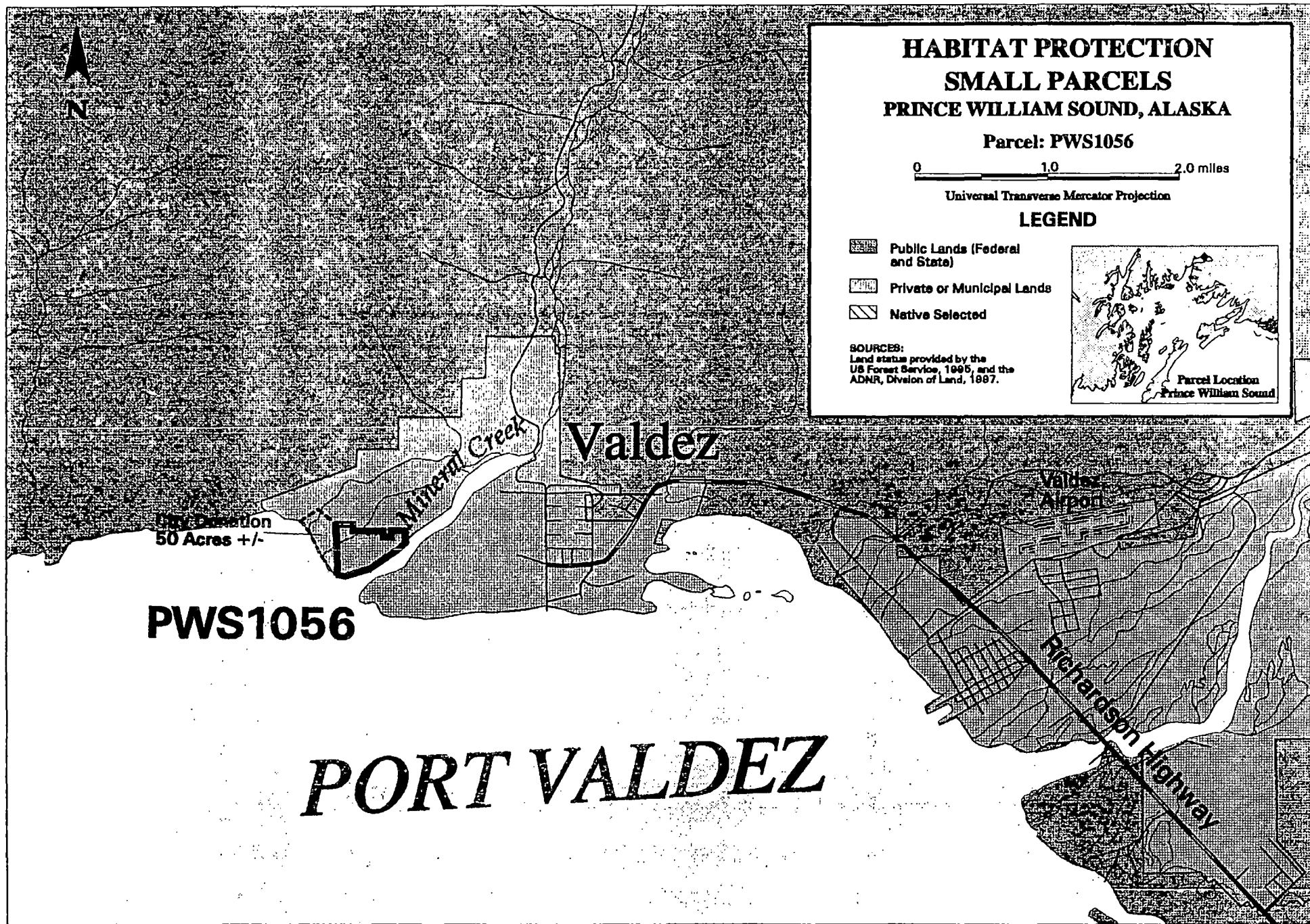
- Pink salmon and sockeye spawn in the river adjacent to the property.
- Recreation/Tourism. Recreation use of this parcel will provide much needed beach access for the residents of Valdez. In addition, acquisition of this parcel will enhance the Shoup Bay trailhead currently slated for construction with Restitution funds.
- Acquisition of this parcel will protect approximately 3,200 feet of creek frontage and the addition of the city owned parcel to this acquisition protects an additional 2,650 feet of shoreline on Port Valdez.

This parcel was ranked at the top of the low category (18) and scored the same as a number of other small parcels which have been identified as Parcels Meriting Special Consideration. The State feels that the parcel provides comparable benefits for injured resources and services.

In addition, the attached resolution by the City of Valdez demonstrates a commitment on the part of the City to support Trustee Council restoration actions by selling the adjacent 50 acres for \$10.00. This action by the city enhances the benefit of the Blondeau parcel by an additional 50 acres with 2,650 feet of shoreline.

Appraised Value. \$626,800

Proposed Management. State Parks would manage the parcel to maintain public access to the beach by possibly improving the road into the property and the parking area near the beach. The Shoup Bay trail head may be relocated to the improved parking area on this parcel.



VALDEZ VANGUARD
6/17/98

Proposed Mineral Creek Marine Park plans take step forward

By Ruth Case

Valdez Vanguard

The appraisal of the Blondeau property for the proposed Mineral Creek Marine Park has been completed and currently awaits review by state and federal authorities.

The Exxon Valdez Oil Spill Trustee Council, the potential

buyer, voted in December 1997 to give the State Division of Natural Resources the authority to do the appraisal, said Carol Fries, a natural resource manager with the DNR. Wayne Blondeau currently owns the 100 acres.

The Council also declared the land an area meriting special attention, Fries said, which moved

the property ahead of other land being considered for purchase.

The state has already committed to building and maintaining a marine park and picnic area near the ocean shore along the mouth of Mineral Creek.

The appraisal, aimed at determining the fair-market value of the property, began in March and

was completed June 5, Fries said adding that fair market value will be determined upon review.

"The appraisal is currently on the schedule to be reviewed by state and federal officials," Fries said. "Because EVOS has members on both the state and federal

level, the Council agreed to have both authorities review (the appraisal)."

Officials would begin the review process as soon as their schedules allowed it, said Fries.

"If the appraisal is approved, it will go back to the EVOS Council to determine if they want to proceed with the purchase," she said.

The City of Valdez offered 50 acres of city-owned land up for sale in December for \$10, as an incentive for the Council to purchase Blondeau's property. The city land was not appraised because the asking price is only \$10.

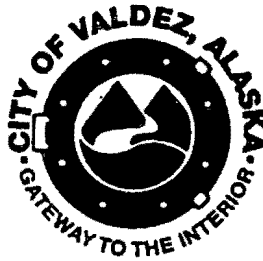
"The Trustees will take action on the city land in conjunction

with the Blondeau property," said Stan Senner, science coordinator for the EVOS Restoration Office. "Right now it is in limbo, waiting for the decision on Blondeau."

Dan Lawn and Mary Jo Evans also offered 16 acres up for sale in December. Blondeau, Lawn, and Evans are asking fair-market price.

"Lawn and Evans' property is currently in the EVOS habitat work group, with representatives from various agencies looking at it," said Fries. "They will evaluate the property for its potential benefits to resources injured in the Exxon Valdez oil spill."

Once the work group has finished looking at the property, it will pass to the EVOS Council for their consideration. If the Council decides to pursue the purchase, an appraisal will be done at that time, said Fries.



RECEIVED
DEC 10 1996

**EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL**

December 6, 1996
Office of the Mayor

Mrs. Molly McCammon
Executive Director, EVOS Trustee Council
645 G. Street, Suite 401
Anchorage, Alaska 99501-3451

Dear Molly:

Since the Exxon Trustee Council funds the acquisition of land to protect the habitat of injured resources and services, to prevent additional injury to resources and services while recovery is taking place, and to provide a long-term safety net for these resources. Keeping this purpose in mind, I am surprised that no agency has stepped forward to be the sponsor for the small parcel of land described as PWS 1056 (Blondeau Parcel). Furthermore, I am quite concerned that no one from the EVOS Trustee Council staff has ever bothered contacting Mr. Blondeau to discuss the merits of his property.

The Blondeau Parcel is an extremely important piece of Alaska wetlands. This section of land is still in a pristine condition and is home to many species injured during the Exxon Valdez Oil spill. This parcel has several spring creeks that currently provide an excellent spawning habitat for Pink and Chum Salmon. Tall shoreline grasses are common to this area, providing nesting areas for many species of birds. As many as 10 to 15 eagles can be seen at once, hunting the wetlands and nesting in the nearby tree lines. The land is located on the shore of Port Valdez, from the mouth of Mineral Creek stretching along the coastline toward Shoup Bay, which I believe may be included in the State Marine Park category.

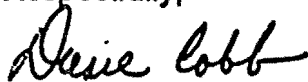
Unfortunately, residential development on this land will occur in the near future if this land is not preserved.

M. McCammon
December 6, 1996
Page 2

I am sure if this land were evaluated, it would score as a high priority and rival the Valdez Duck Flats in value. The Department of Natural Resources has laid out a trail from Mineral Creek to Shoup Bay and will begin construction of this trail in 1997 or 1998. The Blondeau Parcel can be included in this trail system and become the trail head site. A City road provides access to the Blondeau property, which could allow this area to become part of a controlled tourism destination with the potential for a living interpretive area that would naturally display many species injured during the Exxon Valdez oil spill.

I request that your office make inquiries about why there is no sponsorship interest by any of the agencies and ask if someone would at least come to Valdez and review the potential of this property. If I can be of any help in this process, please contact me at 835-4874.

Respectfully,



Dave Cobb, Mayor
City of Valdez, Alaska

December 18, 1996

RECEIVED
DEC 23 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Exxon/Valdez Trustees Council
645 G Street
Anchorage AK 99501

Dear Sirs & Madames:

I am the Chairperson of the Valdez Area State Parks Citizen Advisory Board. This Citizen's Advisory group was recently formed by the State of Alaska, Department of Natural Resources, Division of Parks and Outdoor Recreation Director Jim Stratton by his appointment of members of the Valdez community to this board. The advisory board was appointed to develop legislative recommendations concerning boundaries and proposed management of State Parks, including Marine Parks, the Valdez area. The advisory board is a source of public input to the Department of Natural Resources, Division of Parks and Outdoor Recreation. While we are a fledgling organization at this time (our second meeting being held on December 17, 1996) a matter came to the board's attention which we felt needed a quick response from us. In response to this issue, the board unanimously passed the following resolution:

The Valdez Area State Parks Citizen's Advisory Board wholeheartedly supports the Exxon/Valdez Trustees Council's efforts to purchase the Wayne Blondeau property at the mouth of Mineral Creek in Valdez, Alaska. The Advisory Board hopes that the State and City governments can work out a joint management plan for this property following the acquisition of the property.

As you are aware Mr. Blondeau's property has access to one of the few beaches in the Valdez area. The only beach now truly accessible to the public is Rocky Beach and it is currently endangered by the City of Valdez Small Boat Harbor plans. If those current plans are enacted, there will be no readily accessible beach to the Valdez area residents and the people that come to visit Valdez. The purchase of Mr. Blondeau's property by the Exxon/Valdez Trustees Council would alleviate this problem.

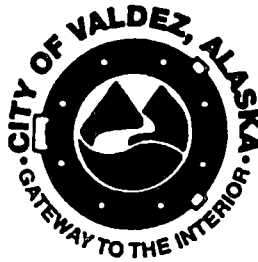
Hopefully, Rocky Beach will not change. Even then the addition of Mr. Blondeau's property will greatly enhance the recreational, educational and economic value of the Valdez area.

Best regards,

Bill Bixby

William Bixby, Chairperson
Valdez Area State Parks
Citizen's Advisory Board

WB/mew



February 19, 1997
Office of the City Clerk

RECEIVED
FEB 24 1997

**EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL**

Exxon Valdez Oil Spill Trustee Council
Molly McCammon, Executive Director
645 G Street, Suite 401
Anchorage, Alaska 99501-3451

Dear Ms. McCammon:

At the regular meeting of the Valdez City Council held on February 18, 1997, the City Council approved Resolution #97-16, supporting the purchase of PWS 1056 Blondeau parcel by the Exxon Valdez Trustee Council.

I have enclosed a copy of Resolution #97-16. We would appreciate the distribution of this resolution to your Council for their consideration.

If we can provide additional information to stress the importance of a high ranking and evaluation of this property by the Trustee Council, please contact Mayor Cobb or myself at 835-3408.

Sincerely,

Sheri L. Caples

Sheri L. Caples, CMC, City Clerk
City of Valdez, Alaska

CITY OF VALDEZ, ALASKA

RESOLUTION NO. 97-16

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALDEZ,
ALASKA, SUPPORTING THE PURCHASE OF PWS 1056 BLONDEAU
PARCEL BY THE EXXON VALDEZ TRUSTEE COUNCIL

WHEREAS, the Exxon Valdez Trustee Council funds the acquisition of land to protect the habitat of injured resources and services, to prevent additional injury to resources and services while recovery is taking place, and to provide a long-term safety net for these resources; and

WHEREAS, the PWS 1056 Blondeau Parcel is an extremely important piece of Alaska Wetlands and home to many species injured during the Exxon Valdez Oil spill; and

WHEREAS, the Valdez State Parks Citizen's Advisory board wholeheartedly supports the Exxon Valdez Trustees Council's efforts to purchase the Blondeau property which will serve to greatly enhance the recreational, educational and ecological value of the Valdez area; and

WHEREAS, the Department of Natural Resources has laid out a trail from Mineral Creek to Shoup Bay that could include this property and become the trail head site for this project; and

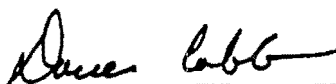
WHEREAS, the City of Valdez has committed to work cooperatively with Alaska State Parks and the Department of Natural Resources in the development of trails and encourages the funding of such important recreation enhancements; and

WHEREAS, this property has the potential for a living interpretive area that would preserve this habitat and naturally display many species injured during the Exxon Valdez Oil spill.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Valdez, Alaska, that the Valdez City Council supports the purchase of PWS 1056 Blondeau Parcel by the Exxon Valdez Oil Spill Trustee Council and request it be ranked high in priority for the preservation of wildlife in Valdez.

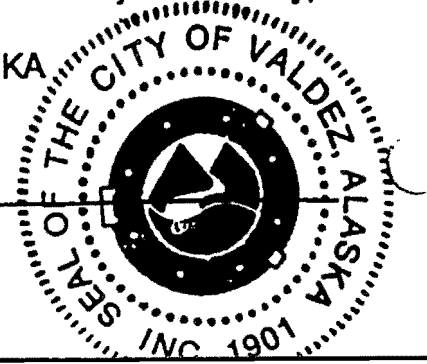
PASSED AND APPROVED by the Valdez City Council, this 18th day of February, 1997.

CITY OF VALDEZ, ALASKA


Dave C. Cobb, Mayor

ATTEST:





Valdez Trails Association
P.O. Box 1540
Valdez, AK 99686

RECEIVED
MAR 10 1997

The Exxon Valdez Trustees
645 G Street
Anchorage, AK 99501

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Re: Purchase of the Blondeau property in Valdez

Dear Trustees:

At the January 14, 1997 meeting of the Valdez Trails Association, the membership voted unanimously to support the acquisition of the Blondeau property at the mouth of Mineral Creek by the Exxon Valdez Trustees Council.

Besides providing important winter and summer habitat for waterfowl, shorebirds, river otters, sea otters, and harbor seals, the area would provide local residents and tourists with undeveloped beach access to Port Valdez. In the past, Mr. Blondeau at times has granted permission to kayakers and other local recreationists to use his property. They testified at the meeting to its value as a picnic area, wildlife watching area, and kayak launching and haul-out area.

We encourage you to pursue this offer.

Sincerely,



Frank Cook
President

THANK YOU FOR YOUR CONSIDERATION
OF THIS AREA. IT IS A VERY NATURAL
LAUNCH SITE WHICH OFFERS A SAFE
BYPASS OF A DANGEROUS RIP CLOSER
TO TOWN.

PLEASE CALL ME WITH ANY QUESTIONS

Eric Myers

From: Oil Spill Public Information Center
To: Eric Myers
Subject: EVOS Trustee Council Land Purchase
Date: Friday, June 27, 1997 8:41AM

>Date: Fri, 20 Jun 1997 14:08:27 -0700
>From: Karen Weiland <vnkbw@UAA.ALASKA.EDU>
>Subject: EVOS Trustee Council Land Purchase
>X-Sender: vnkbw@cwolf.uaa.alaska.edu
>To: ospic@alaska.net

>To EVOS Trustee Council members,

>I understand that the Trustee Council is considering buying a parcel of
>private land at the mouth of Mineral Creek. As a Valdez resident, I urge
>you to make this purchase. Public access to the beach is limited in Valdez.
>This would be a valuable addition to recreational lands. This purchase is
>strongly supported by the Valdez Area State Parks Advisory Board, the Valdez
>Trail Association,, and the Valdez City Council. Please give this Mineral
>Creek land purchase serious consideration.

>Thank you.

> Karen Weiland

Eric Myers

From: Oil Spill Public Information Center
To: Eric Myers
Subject: Mineral Creek land purchase
Date: Friday, June 27, 1997 8:48AM

Date: Sat, 21 Jun 1997 14:54:48 -0500

>From: "Kathryn E. Nielsen" <rogues@Alaska.NET>

>To: OSPIC@alaska.net

>Subject: Mineral Creek land purchase

>

>To the EVOS Trustee Council,

>As a resident of Valdez I am writing to request your approval of the

>purchase of the Mineral Creek property that you are presently

>considering. It is a valuable environmental and recreational asset for

>this area. I cannot express strongly enough how important this is for

>Valdezans and others visiting our area both now and in the future.

>Please give it your careful consideration. Thank you! Kathy Nielsen,

> Valdez, Alaska.

>

>

in

June 23 '97

Hello -

I'm a Valdey resident - it has been pointed out to me that there is coast line land for sale that could be bought w/ EXXON settlement money, and be designated a state park.... but since the piece of land is only around 90 acres - in order for the purchase to happen, local interest must be expressed....

Well, consider my local interest expressed. I would love to see any available ^{coastal} land become public access / use. It is a great jumping off spot for kyacking - or jet ski-ing - buy this land and to do

when you live in or visit
Valdez.

Thank You

Carol A Green

Box 2750

Valdez AK 99681

RECEIVED

JUN 26 1997

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

As you may be aware, the Trustee Council has been established to provide a forum for the public to voice their concerns and suggestions regarding the Exxon Valdez oil spill.

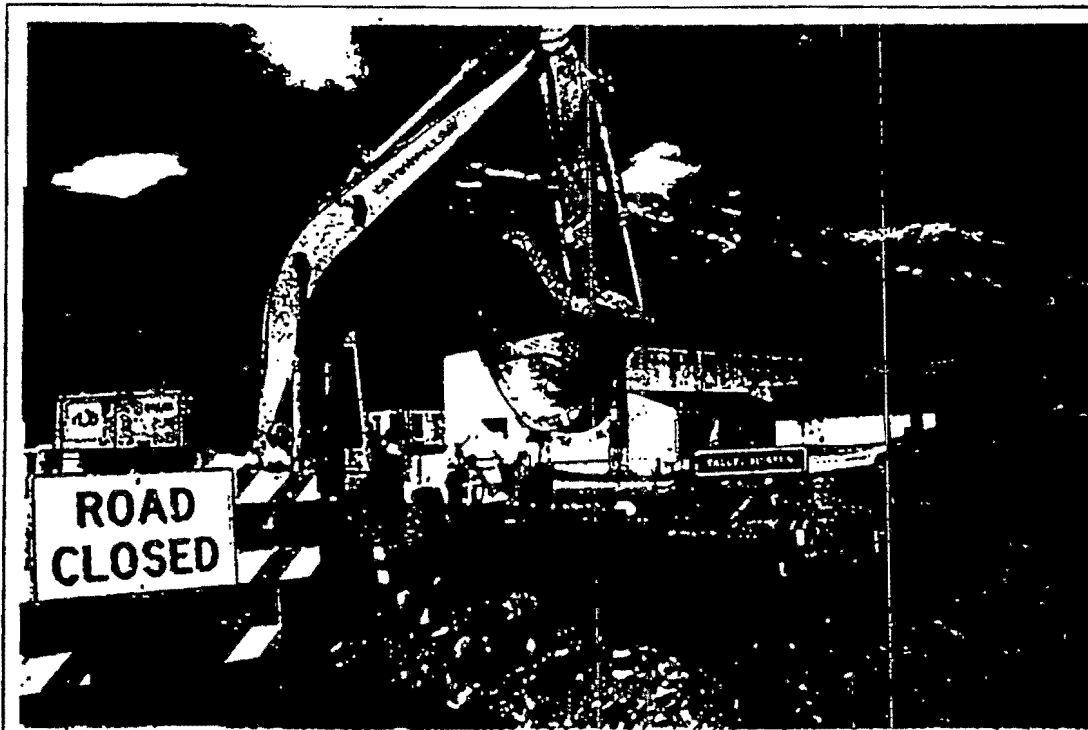
As you may be aware, the Trustee Council has been established to provide a forum for the public to voice their concerns and suggestions regarding the Exxon Valdez oil spill. The Council will be responsible for monitoring the progress of the cleanup and for providing recommendations to the responsible agencies.

We have received a substantial amount of support from the public and are pleased to announce that the Trustee Council has been established. The Council will be responsible for monitoring the progress of the cleanup and for providing recommendations to the responsible agencies. We are looking forward to working with you on this important issue.

Sincerely,

W. G. M. [Signature]
Executive Director

Group Seeks Mineral Creek Park Lands



Sign Of The Times: Road Closed & Detours On Egan

Egan Drive was on-again, off-again this past week as Wilder Construction intermittently closed main street for placement of storm drain catch basins. It's all part of the reconstruction of Egan and Hazelet, both of which are state highways. Project super Trevor Edmondson of Wilder Construction invites anyone to call the office at 835-3083 for updates on the project.

MINERAL CREEK--A group of wilderness park enthusiasts is rallying local support for the acquisition of the 96-acre Wayne Blondeau property at the mouth of Mineral Creek.

The group says the Blondeau property would preserve a wide cobble beach at tidewater, and offer a diverse habitat for eagles, bears and assorted animals, and would serve as a trailhead for both the Shoup Bay walking trail and a planned Kayak water trail.

The group plans to petition the Exxon Valdez Oil Spill Trustee Council to appropriate funds for the acquisition of the property.

Current value of the 96 acres--according to the property tax assessment roles at city hall--is \$175,000. The land is owned by Wayne Blondeau who homesteaded the property in the early 1960s

Local attorney Bill Bixby is among those beating the drums for acquisition of the property which is treed on the north side and barren where the threaded Mineral Creek stream reaches tidewater.

Bixby is chairman of the Valdez Citizens' Advisory Board which seeks to advise the state on the management of state parks in the Valdez area.

Bixby says the Mineral Creek property offers an opportunity for Valdez residents to preserve the last in-town accessible beach-front area.

The future of the other beach opposite the causeway leading to The Spit is uncertain in the face of plans to create a huge tidal

Oil Spill Council Asked To Purchase Land...

Blondeau Parcel Seen As Possible Park

basin to flush the Small Boat Harbor. That project is expected to begin late this summer or early fall.

Bixby is seeking to generate an outpouring local support for the purchase--letters to the trustee council, resolutions of support from public agencies, declarations from sports fishing groups and charters operators, wilderness and hiking enthusiasts and the like.

"We need to get grass roots support in order to give this a high priority" on the list of projects funded

by the Exxon Valdez Trustee Council, he says.

The trustee council was charged with spending \$900 reached in a settlement with the Exxon Corporation in the wake of the 1989 oil spill from the Exxon Valdez tanker.

The trustee council has \$350 million remaining of the original sum. All projects, however, must be directly related to the restoration of the environment impacted by the spill.

Group wants help to start marine park

By Tony Bickert

Valdez Vanguard

The hundred acres of shoreline property for sale at the mouth of Mineral Creek would make a fine marine park, say city and state officials. But the potential buyer — Exxon Valdez Oil Spill Trustee Council — may

need some prodding from the public.

"If we can get a thousand post cards and letters coming from Valdez, encouraging the Trustee Council to purchase this property, I think we'd get it," said Bill Bixby, chairman of the State Parks Citizens Advisory Board, which is pushing the write-in campaign.

The board, which advises the State Parks Department on land management issues, and the City of Valdez are attempting to convince the Trustee Council to buy the land under its small parcels purchase program. The property is currently for sale by Valdez land owner Wayne Blondeau.

"It's a beautiful area, right along the shore line, with lots of marsh grasses and good habitat for ducks and birds and geese and fish and everything else," said Valdez mayor Dave Cobb.

Bixby and Cobb said the location, the only beach-front land in Valdez other than Dock Point, is not only ideal for general use, but a strategic trail head location. Cobb said the Shoup Glacier-to-Valdez Trail, currently under construction, could begin there. Bixby also wants to establish the spot as a marine trail launch area for kayaks. The area would also feature good pink and silver salmon fishing from the shore.

However, although the Trustee Council sees merit in purchasing the property, the matter is at best on the back burner, said Eric Myers, the council's director of operations.

Myers said the land is not only ranked low in terms restoration and preservation needs, but the council is currently not considering additional new purchases until it eliminates the current backlog.

"There is an appreciation that the Blondeau property is of considerable interest to the City of Valdez as well as the State Parks Citizens Advisory Board," Myers said. "But the council is trying to work their way through what's already on the list. Right now we're cleaning the plate."

The small parcels purchase program, which involves evaluating, ranking and buying land directly or indirectly affected by the 1989 spill, to be preserved or restored, has received 320 nominations since the program began in 1994. Myers said 15 percent have or are in the

process of being purchased.

Even when the moratorium is lifted, Myers said the Blondeau property evaluation showed little adverse impact from the spill and is therefore ranked low on the list of potential purchases.

However, he said environmental impact is only one criteria.

"The decision has to be based on what the restoration values are, but certainly one factor that the council considers is what the public wants," Myers said. "And whenever we get a card and letter here in the office we always make sure that each member of the council gets a copy."

If the council does purchase the property, the State Parks Department would develop and manage the area. The Department of Natural Resources has also shown an interest, Myers said.

Cobb said the city supports the concept because it's a "win-win" scenario.

"I don't see the city putting any money into it," Cobb said. "It will all be done by the Trustee funds and maintained by State Parks. So, we want to try to get it moved ahead in the process."

Bixby said that, aside from the write-in campaign, the advisory group also plans to have other biologists examine the area for evidence of indirect impact from the spill.

"The plan is to have a multi-front attack," he said. "For instance, if we find out that river otters are on that property, that will change the priority."

Although none of Exxon's oil reached Valdez, Bixby said spill-affected wildlife species may use the area. If so, he said the ranking could move up on the list. But the advisory group is counting more on public support.

"We want to get people jazzed up about it, even if it means going door to door to get people to sign a petition," Bixby said.

Other advisory board members are Harold Blehm, Tabatha Gregory, Rich Chaffin, Pat Welch, Nancy Lethcoe, Jeanne Passini, Bill Deppe and Shanna Simmons.

The address of EVOS Trustees' Council Executive Director Molly McCammon is 645 G Street, Suite 401, Anchorage AK, 99501-3451.

THE VALDEZ VANGUARD
JUNE 25, 1997

LAW OFFICES OF
WILLIAM BIXBY
POST OFFICE BOX 1229
VALDEZ, ALASKA 99686

William Bixby
Michael Franciosi

July 1, 1997

Telephone (907) 835-4775
Fax (907) 835-2793

RECEIVED
JUL 3 1997

Exxon Valdez Trustee Council
645 G Street, Suite 401
Anchorage, AK 99501

Dear Trustees:

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Enclosed with this letter, please find a petition signed by individuals who urge you to purchase Wayne Blondeau's property located at the mouth of Mineral Creek in Valdez, Alaska. In a short time period (approximately one week) several individuals have gathered 315 signatures of people who overwhelming support for your purchase of the Blondeau property. By your next quarterly meeting we promise that you will receive several thousand signatures and/or letters urging you to purchase Mr. Blondeau's property.

Additionally, a local citizen's group has made contact with City officials and has proposed to them that the City donate some adjacent land to Mr. Blondeau's property so that your dollars gets more bang for the buck, so to speak. The City is seriously considering this.

Finally, we would ask that Mr. Blondeau's property be re-evaluated by the council. I have spoken to Mr. Blondeau and he states that in his application he noted that 18 of the 19 injured species from the oil spill are on his property. I own land adjacent to Mr. Blondeau's property on the east side of Mineral Creek and am personally aware of a Dolly Varden run in the creek. Each fall there are spectacular views of eagles feeding frenzy on Mr. Blondeau's property. In addition, my daughter and I launched our kayaks from Mr. Blondeau's property and he pointed out nesting oyster catchers that were on his property. In your evaluation of Mr. Blondeau's property, these two species are not noted as being present. Thus, it would appear, apart from its great scenic value, this parcel is environmentally important to 18 of the 19 oil spill injured species. If documentation of these species are needed, I would be happy to coordinate an effort to get this done. If you have any questions, please do not hesitate to contact me.

Best regards,

Bill Bixby

William Bixby

WB/mw
Encls.

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

WE, the undersigned, urge the Trustees of the Exxon Valdez Oil Spill Trustee Council to use funds from the Exxon Valdez Oil Spill Settlement to purchase Wayne Ndeau's property located at the mouth of Mineral Creek in Valdez, Alaska. We believe that the purchase of this property would help in the rehabilitation of the species injured by the Exxon Valdez oil spill and would be amongst the most prime scenic and recreational property in the Valdez area.

DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 27 June 97	EDWARD C. PAYTON	Edward C. Payton	Box 3570 2001 Homestead Rd.
2. 6/27/97	LORETTA L. PAYTON	Loretta L. Payton	2001 Homestead Rd. P.O. Box 3570
3. 6/27/97	Sheri Caples	Sheri Caples	2101 Homestead Rd
4. 6/27/97	John Pierce	John Pierce	2101 Homestead
5. 6/27/97	ROBERT ZASTROW	Robert Zastrow	2041 Homestead
6. 6/27/97	SHIRLEY DIBBLE	Shirley Dibble	1870 Homestead Rd.
7. 6/27/97	DAVID DIBBLE	David Dibble	1870 Homestead Rd.
8. 6/27/97	HARRY DIBBLE	Harry Dibble	1870 Homestead Rd.
9. 6/27/97	ROBERT SWIFT	Robert Swift	1705 HOMESTEAD
10. 6/28/97	DONNA WALSH	Donna Walsh	1773 HOMESTEAD P.O. BOX 1224, VALDEZ
11. 6-28-97	Howard Short	Howard Short	P.O. Box 3284 VALDEZ
12. 6-28-97	Rosemary Short	Rosemary Short	P.O. Box 3284 VALDEZ
13. 6-28-97	L. Ray Clausen	L. Ray Clausen	Box 1806 VALDEZ
14. 6-29-97	DON. B. GUNION	Don B. Gunion	Box 506 VALDEZ
15. 6-29-97	DANIEL L. GUNION	Daniel L. Gunion	Box 3432 VALDEZ
16. 6-29-97	JASON GUNION	Jason Gunion	Box 842 Valdez
17. 6-29-97	Diana Demarais	Diana Demarais	PD 3441 Valdez
18. 6-29-97	Brenda Moore	Brenda Moore	Box 1551 Valdez
19. 6-29-97	Robin James	Robin James	Box 1663
20. 6-29-97	Sue M. Malister	Sue M. Malister	Box 1265. 1800 H.M.
21. 6-29-97	Kathy Kitts	Kathy Kitts	P.O. BOX 2062 Valdez
22. 6-29-97	Mike Huntley	Mike Huntley	P.O. BOX 2062 Valdez
23. 6-30-97	Julie Duncan	Julie Duncan	PO Box 1315 Valdez
24. 6-30-97	David Duncan	David Duncan	PO Box 1315 Valdez
25. 6-29-97	SANDRA WILHELM	Sandra Wilhelm	Box 3237 VALDEZ

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6-27-97	LAURA A KELSEY	Laura A Kelsey	Box 861 Valdez AK
2. 6-27-97	Thelma Christoffersen	Thelma Christoffersen	Box 144 " "
3. 6-27-97	Rene Carman	Rene Carman	Box 232 Valdez
4. 6-27-97	Yolanda Rain	YOLANDA RAIN	Box 990 Valdez, AK
5. 6-27-97	Laura Tolicoeur	Laura Tolicoeur	Box 3710 Valdez AK
6. 6-27-97	Carrie Gundersen	Carrie Gundersen	Box 2554 " "
7. 6-27-97	Jill Kirkman	Jill M. Kirkman	Box 2834 " "
8. 6-27-97	Ruth Hawk	Ruth Hawk	Box 2645 " "
9. 6-27-97	BIRUTA A. BARR	Biruta A. Barr	Box 1128 " "
10. 6-28-97	PATRICIA A Rego	Patricia A Rego	Box 2018 " "
11. 6-28-97	Emily Kaiser	Emily Kaiser	Box 246 " "
12. 6-28-97	James Watkins	James Watkins	Box 2444 " "
13. 6/28/97	Kirdee Watkins	Kirdee Watkins	Box 2444 " "
14. 6-28-97	BARBARA A TAYLOR	Barbara A Taylor	Box 1069 " " 178
15. 6-28-97	Jean A. Phillips	Jean A. Phillips	Box 989
16. 6-28-97	Rob Chitt	Rob Chitt	Box 387 " "
17. 6-28-97	HAROLD PLUSTER	Harold Pluster	P.O. Box 743 Valdez
18. 6/28/97	PAULIE Smith	Paulie Smith	213 Larupine
19. 6/28/97	PATRICK A. DAY	Patrick A. Day	108 EKUTNA ST. Box 788 VALDEZ
20. 6-28-97	IMOGENE L. CALHOUN	Imogene L. Calhoun	P.O. Box 793 Valdez, AK
21. 6-28-97	JOYCE J. JOHNSON	Joyce Johnson	Box 5 Vdz. EIDALGO DR.
22. 6-28-97	DALE M. Willhite	Dale Willhite	Box 506 Valdez AK
23. 6/28/97	WILBUR L. FRIBB	Wilbur L. Fribb	P.O. Box 2049, VALDEZ AK
24. 6-28-97	Lloyd H. TREMER	Lloyd H. Tremmer	P.O. Box 649 Vdz AK
25. 6-28-97	GENEVIEVE JOSEPHSON	Genevieve Josephson	P.O. Box 1501 Vdz AK

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/24/97	Donna M Wright	Donna M Wright	Box 382 Copper Center AK
2. 6/24/97	Mitchel M. Wright	Mitchel Wright	" "
3. 6/24/97	Mornie Wright	Mornie Wright	" "
4. 6/24/97	Matt Kress	Matthew Kress	TS 42nd Lodge SR 80
5. 6/24/97	Sarah Blangsted	Sarah Blangsted	TSAINA LODGE SR 80
6. 6/24/97	LISA WAX	Lisa Wax	TSAINA SR 80 VALDEZ
7. 6/25/97	Michael Moore	Michael S. Moore	TSAINA SR 80 Valdez
8. 6/25/97	Jennifer Brunner	J Brunner	TSAINA SR 80 Valdez
9. 6/25/97	Jenna Stephens	Jenna Stephens	137 Brunner St Valdez
5/25/97	Evan Sorrell	Evan Sorrell	Box 1297 Valdez
11. 6/27/97	Robert J. Severson	Robert J. Severson	Box 413 Valdez
12. 6.27.97	J. Ed Murray	J. Ed Murray	Box 1725 Valdez
13. 6/27/97	Danna Miller	Danna Miller	Box 24 Valdez
14. 6/27/97	JOHN VERGERE	John Vergere	Box 1025 Valdez
15. 6/27/97	Sheree Weldon	Sheree Weldon	PO Box 1444 Woodside AK
16. 6-27-97	Chris Lutz Felt	Chris Lutz Felt	PO Box 2400 Valdez AK
17. 6/29	Jane Douglas	Jane Douglas	SR 80 VALDEZ AK 99686
18. 6/29	PAUL BIRKELAND	Paul Birkeland	SR 80 VALDEZ
19. 6/29	Lucy Lang	Lucy Lang	Box 2169 VALDEZ
20. 6/29	NICOLE BROCK	Nicole Brock	SR 80 VALDEZ
21. 6/29/97	JAMES STEVANS	James Stevans	3417 Mission C. Hwy Ky 40502
6/30/97	Joseph K. Michaud	Joseph K. Michaud	Box 2805 Valdez, AK 99686
23. 6-30-97	Anthony R. Smith	Anthony R. Smith	PO Box 903 Valdez, AK 99686
24. 6-30-97	Kimberly Simons	Kimberly Simons	403 W. Lowe Box 2086 Valdez
25. 6-30-97	Kandi Monn	Kandi Monn	Box 2500 Valdez, AK 99686

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. June 25/97	Robin Whaley	<i>Robin Whaley</i>	Box 3355 Valdez, AK
2. June 25/97	Sean Nielsen	<i>Sean Nielsen</i>	P.O. Box 2660 Valdez, AK
3. June 25/97	Mollie Good	<i>Mollie Good</i>	P.O. Box 2660 Valdez, AK
4. 6/25/97	MAKREEN COLBY	<i>Maureen Colby</i>	POB 2624 Valdez AK
5. 6/25/97	MARIE ROBERTSON	<i>Marie Robertson</i>	POB 3401 Valdez
6. 6/25/97	Judy Kitagawa	<i>Judy A. Kitagawa</i>	PO Box 1451 Valdez AK
7. 6/25/97	BRUCE GOOD	<i>Bruce Good</i>	PO Box 2660 VALDEZ AK
8. 6/25/97	Janice P. Michael	<i>Janice P. Michael</i>	P.O. Box 1461, Valdez, AK
9. 6/25/97	NANCY BRATTON	<i>Nancy Bratton</i>	PO Box 952 Valdez, AK
10. 6/25/97	Stephanie Bratton	<i>Stephanie Bratton</i>	PO Box 952 Valdez, AK
11. 6/25/97	Chris Bratton	<i>Chris Bratton</i>	PO Box 952 Valdez, AK
12. 6/25/97	Mary Evans	<i>Mary Evans</i>	Box 277 Valdez
13. 6-25-97	Theresa Ingram	<i>Theresa Ingram</i>	Box 2107 Valdez AK
14. 6/25/97	PATRICIA MASTERS	<i>Patricia Masters</i>	PO. 1856 Valdez, AK
15. 6-25-97	Julene Hood	<i>Julene Hood</i>	P.O. Box 1222 Valdez
16. 6-25-97	Nickie L. Hood	<i>Nickie L. Hood</i>	PO Box 1222 Valdez
17. 6/26/97	Gene Salinas	<i>Gene Salinas</i>	Box 915, Valdez
18. 6/26/97	Jan Holsten	<i>Jan Holsten</i>	P.O. Box 1694 Valdez
19. 6/26/97	Jonathan Michael	<i>Jonathan Michael</i>	Box 1461 Valdez AK
20. 6/26/97	MELANIE MAYNES	<i>Melanie Maynes</i>	Box 968, Valdez AK
21. 6/26/97	JOHN MONEELS	<i>John Moneels</i>	Box 1594 Valdez AK
22. 6-26-97	Jesse Tol	<i>Jesse Tol</i>	Box 1623 Valdez AK
23. 6/27/97	Bill Bryson	<i>Bill Bryson</i>	Box 1133 Valdez AK
24. 6/26/97	Christine Hunt	<i>Christine Hunt</i>	Box 3711 Valdez AK
25. 6/26/97	Ashley Nunla	<i>Ashley Nunla</i>	P.O. Box 3594 Valdez, AK


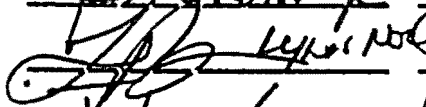
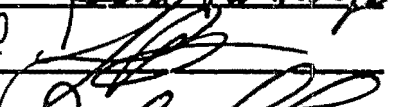


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DATE	PRINTED NAME	SIGNATURE	ADDRESS
6/25/97	Anne Will	Anne M Will	PO Box 1533, Valdez
6/25/97	Kathleen Todd	Kathleen J. Todd MD	Box 1829, Valdez
6/25/97	Brenda Taylor	Brenda Taylor	Box 822, Valdez
6/25/97	Peyton Coleman	PEYTON COLEMAN	Box 795 " "
6/25/97	ROGER PYLE	Roger Pyle	Box 501
6/25/97	Joseph Roth	Joseph Roth	Box 822 Under
6/25/97	Beverly Coleman	Beverly Coleman	Box 795 " "
6/25/97	Lori Saylor	Lori Saylor	Box 1447 Valdez
6/25/97	Suzanne Holmes	Suzanne Holmes	Box 3066 Valdez
6/25/97	Beth Duff	Beth Duff	Box 2326 Valdez
6/25/97	Cara Murphy	Cara Murphy	P.O. Box 3596
6/25/97	T.J. RODGERS	T.J. Rodgers	P.O. Box 96 Valdez
6-25-97	Sherrice Day	Sherrice Day	P.O. Box 2718 Valdez
6/25/97	SHERYL GRUBBS	Sheryl Grubbs	P.O. Box 526 Valdez
6/25/97	Chris Kunko	Chris Kunko	P.O. Box 32 " " " "
6/25/97	Craig Rodgers	Craig H. Rodgers	P.O. Box 96 Valdez
6/25/97	Julie Haltness	Julie Haltness	Box 1818 Valdez
6/25/97	Lori Olson	Lori Olson	Box 2021 Valdez
6/25/97	Tammy Hill	Tammy Hill	Box 1663 Valdez
6/25/97	Dorothy Noffke	Dorothy Noffke	Box 975 Valdez
6/25/97	Korrie Gillilan	Korrie Gillilan	Box 2873 Valdez
6/25/97	STEVE BROCKMAN	Steve Brockman	P.O. Box 3040 VALDEZ
6/25/97	Cynthia Brockman	Cynthia Brockman	Box 3040 Valdez
6/25/97	Gasthy P. Crew	Gasthy P. Crew	PO Box 1482 Valdez
6/27/97	Michael Bennett	Michael Bennett	PO BOX 1380 Valdez

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

WE, the undersigned, urge the Trustees of the Exxon Valdez Oil Spill Trustee Council to use funds from the Exxon Valdez Oil Spill Settlement to purchase Way Blondeau's property located at the mouth of Mineral Creek in Valdez, Alaska. We feel that the purchase of this property would help in the rehabilitation of the species injured by the Exxon Valdez oil spill and would be amongst the most prime scenic and recreational property in the Valdez area.

DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/25	SEAN ABELLANA		Box 2491 VALDEZ 99661
2. 6/25	Mariah Offer	Mariah Offer	Box 3848 Valdez 99686
3. 6/25	Alex La	HEOY SARNEY	Box 1821 VALDEZ, AK 99661
4. 6/25	SHARON MESLEY	Sharon Mesley	Box 323 GARONA AK 99616
5. 6/25	Martina Wilcox	M. Wilcox	Box 97 VALDEZ, AK 99661 6057 E. Seaview St. N.Y.
6. 6/25	June Donovan	June Donovan	39 Bishop Rd W. Hailwood C
7. 6/25	Jerry Portridge	Jerry Portridge	31 Williams St. W. Hailwood C
8. 6/25			PO Box 2691 Valdez AK 99661 Seattle, WA 98119 2912 N.W. 52nd Ave
9. 6/25	John Lawrence		2912 N.W. 52nd Ave
10. 6/26	Pamela S. Fettes-McLardy	Pamela S. Fettes-McLardy	2900 Cauthervill Rd, McKeesport PA 15136
11. 6/26	Teresa Dunn	Teresa Dunn	207 Western Ave #1 Hagerstown PA 17321
12. 6/26	Don Nickles		1107 Quail Roost, Pittsburgh PA 15231
13. 6/26	Susan Bradley	Susan Bradley	401 Western Ave #1 Pittsburgh PA 15211
14. 6/26	Andrea K. Malden	Andrea K. Malden	P.O. B. 1805 Valdez, AK 99661
15. 6/26	Ann Britt Malden	Ann Britt Malden	3001 E. Hiram Ln. Phoenix AZ 85028
16. 6/26	Janna Treisman	Janna Treisman	4250 82nd Ave SE Everett WA 98202
17. 6/26/97	Dede Wilburn	D. Wilburn	1511-H Street S. Anchorage, AK 99503
18. 6/26/97	David Manley	David Manley	107 Madison Ave #1 Newton MA 02459
19. 6/27/97	Bill Louch	Bill Louch	42nd St Anch, AK 99501
20. 6/27/97	Nicholas Chevallier	Nicholas Chevallier	2845 42nd Pl Anch AK 99503
21. 6/27/97	Michelle Fuller	Michelle Fuller	1183 Mineral Creek Anch AK 99503
22. 6/27/97	DANIEL KRIVDSEEN	Daniel Krivdseen	8XCAS2VDSV 120 50670 FELTANUS SWE
23. 6/27/97	SUSAN ELSE	S. M. Else	BRISBANE AUSTRALIA
24. 6/27/97	Kirsti Gardiner	K. Gardiner	70, 30 447 15th Ave #5 S.F. CA 94111
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PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

WE, the undersigned, urge the Trustees of the Exxon Valdez Oil Spill Trustee Council to use funds from the Exxon Valdez Oil Spill Settlement to purchase Wayne Wadeau's property located at the mouth of Mineral Creek in Valdez, Alaska. We feel that the purchase of this property would help in the rehabilitation of the species injured by the Exxon Valdez oil spill and would be amongst the most prime scenic and recreational property in the Valdez area.

DATE	PRINTED NAME	SIGNATURE	ADDRESS
6/21	Betsy Fanton	Betsy Fanton	120 Palmer Dr. Ft Collins CO 80501
6/27	Beth Bacon	Beth Bacon	1706 Henry, Ft Collins, CO 80501
6/27	Amy Eicher	Amy Eicher	P.O. Box 1371
6/27	Neil H. H. NGIL	Neil H. H. NGIL	P.O. Box 1371
6/27	Luke Evans	Luke Evans	
6/28	Sharon Yencharis	Sharon Yencharis	2275 Caminito Pajarito #174 SAN DIEGO, CA 92107
6/28	DAVID GRISBY	David Grisby	227 3rd St. Encinitas, CA 92021
6/28	Eric Boyer	Eric Boyer	5501 S. Bend Rd. Baltimore MD 21220
6.29.97	JOHN D. LYLE	John D. Lyle	Box 83715 FRS ALASKA 99708
6/29/97	Jon Miller	Jon Miller	2630 N. Hwy. 1940 N. Hwy. 1940
6/30/97	Nancy MORRIS	Nancy MORRIS	Box 525 Delta Junction AK 99701
6/30/97	Dusty Robinson	Dusty Robinson	635 4th St Box 70 Deer Trail, CO 80105
6/30/97	JULIE ROBINSON	Julie Robinson	635 4th St DEER TRAIL CO 80105
6/30/97	Shane Robinson	Shane Robinson	635 4th St. Deer Trail CO 80105
6/30/97	GEORGE L. Robinson	George L. Robinson	635 4th St Deer Trail CO 80105
6.30.97	AND. R. PENNYCOTT	AND. R. PENNYCOTT	112 Greenway St. Painesville OH 44060
30.6.97	Sudy Irwin	Sudy Irwin	Magheramulley, Broughshane Northern Ireland
6/30/97	Marge + Chris Levine	Marge + Chris Levine	3 Helen the Wall, Clancy MT 59603
6/30/97	Jane JOHNSON	Jane JOHNSON	Box 82. Nhulunbuy N.T. Australia
6/30/97	Anne Ludbrook	Anne Ludbrook	P.O. Box 1151 Nhulunbuy N.T. Australia
6/30/97	Debbie Ulrich	Debbie Ulrich	1196 E. 1st Ave. Santa, CA 95021

PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/24/97	William Bixby	William Bixby	Box 1229 Valdez, AK 99686
2. 6/27/97	Katie Fair	Katie Fair	Box 3059 " " "
3. 6/27/97	Annie Wilcox	Annie Wilcox	Box 2936 " " "
4. 6/27/97	Caily Wright	Caily Wright	Box 1807 " " "
5. 6/26/97	BILL WILCOX	Bill Wilcox	POB 2936 " " "
6. 6/26/97	Carly Rae Catigan	Carly Rae Catigan	Box 800
7. 6/26/97	Erica Hancock	Erica Hancock	Box 3710 " " "
8. 6/26/97	Larry A. Sportsman	Larry A. Sportsman	Box 2296
9. 6/26/97	James Fair	James Fair	Box 3054 Valdez, AK
10. 6/26/97	Annalisa DeLozie	Annalisa DeLozie	Box 1934, Valdez, AK
11. 6/27/97	Amanda Hartman	Amanda Hartman	Box 1524, Valdez, AK
12. 6/27/97	Andrew Hartman	Andrew Hartman	Box 1524 Valdez, AK
13. 6/27/97	Tony Bickert	Tony Bickert	Box 2589 Valdez AK
14. 6/27/97	Anthony Francisco	Anthony Francisco	Box 2893 Valdez AK
15. 6/29/97	Michael Francisco	Michael Francisco	P.O. Box 2893 Valdez AK
16. 6/30/97	Tim Kinscherf	Tim Kinscherf	POB 2140 Valdez AK
17. 6/30/97	Bill Blum	Bill Blum	P.O. Box 1632, Valdez AK
18. 6/30-97	Anny Wilco	Anny Wilco	1104 " " "
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/25/97	James Winters		Box 1553 Valdez AK
2. 6/25/97	Jo Ann C. McDermott		Box 156 Valdez
3. 6-25	Laura J. Kennedy	Laura J. Kennedy	Box 3342 VDEZ
4. 6-25	Douglas Desrosier		Box 651 Valdez
5. 6/25/97	Wendy Kay Olkjer	Wendy Kay Olkjer	Box 368 Valdez AK
6. 6-25-97	Debbie Crawford		Box 2420 Valdez AK
7. 6-25-97	Joseph Prun		P.O. Box 2452 VALDEZ AK
8. 6/26/97	Neil V. Kelly		Box 2862 Valdez AK
9. 6/26/97	ERIC R. LOPEZ		Box 2674 Valdez AK
10. 6/26/97	Jess Conder		Box 391 Valdez AK
11. 6-26-97	Chris Bed		Box 322 Valdez Alaska
12. 6/26/97	MARION HUEMAN		Box 1481 VALDEZ AK
13. 6-27-97	Shelle Moeller		Box 1362 Valdez AK
14. 6-27-97	Melodie Mackey	Melodie Mackey	Box 1996 Valdez AK
15. 6/27	MARK JOHNSON		2948 Valdez AK
16. 6/30	Margie Conway	Margie Conway	Box 3098 Valdez AK
17. 6/30	Miesha Oliver		Box 97 VALDEZ AK 99682
18. 6/30	John Barnard		Box 1924 VALDEZ, AK 99681
19. 6/30	Judith M. Londo	Judith M. Londo	Box 703 Valdez AK 99682
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/25/97	Marilyn Waller	Marilyn Waller	POB 2133, Valdez, AK
2. 6/25/97	Kim McCarty	Kim McCarty	POB 1285 Valdez AK
3. 6/25/97	Jim Lindsey	Jim Lindsey	809 Valdez
4. 6/25/97	KATHY NIELSEN	Kathy Nielsen	633 Copper St. Valdez AK
5. 6/25/97	Brian Parke	Brian Parke	Box 3111 Valdez
6. 6/25/97	LAURA GIPSON	Laura Gipson	P.O. Box 1559 Valdez
7. 6/25/97	SUE BRADY	Sue Brady	Box 1664 Valdez
8. 6/25/97	Teddy Koszarek	Teddy Koszarek	Box 1941 Valdez
9. 6/25/97	RIK NIELSEN	Rik Nielsen	BOX 944 Valdez
10. 6/25/97	Catherine Halley	Catherine Halley	Box 1515 Valdez
11. 6/25/97	Chelsea Halley	Chelsea Halley	Box 1515 Valdez
12. 6-26-97	LYNN SNYDER	Lynn Snyder	BOX 3251 Valdez, AK
13. 6/27/97	Judith M London	Judith M. London	Box 703 Valdez, AK
14. 6/27/97	Warren F. Dorn	Warren F. Dorn	Box 2890 Valdez AK
15. 6/27/97	Dwain Dunning	Dwain Dunning	Box 1876 Valdez AK
16. 6/27/97	Vicky J. Woods	Vicky J. Woods	Box 1136, Valdez, AK
17. 6/27/97	Jennifer Kelly	Jennifer Kelly	Box 2862, Valdez, AK
18. 6/28/97	Kathy Rutter	Kathy Rutter	Box 893, Valdez, AK
19. 6/29/97	Abby Koszarek	Abby Koszarek	Box 1941, Valdez, AK
20. 6/29/97	Shannon Koszarek	Shannon Koszarek	Box 1941, Valdez, AK
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PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/25/97	Lorraine McHone	Lorraine McHone	PO Box 1023 Valdez
2. 6/25/97	Terese Bingham	Terese Bingham	P.O. Box 1046 Valdez
3. 6/25/97	Jo Marie Mayer	Jo Marie Mayer	PO Box 3133 Valdez
4. 6/25/97	Ronnie Kirby	Ronnie Kirby	Box 3043 Valdez
5. 6/25/97	Jolyn E Haneckow	Jolyn E Haneckow	POB 463 Valdez
6. 6/25/97	Jennifer Williams	Jennifer Williams	P.O. Box 113 Valdez
7. 6/25/97	Jackie Robb	Jackie Robb	Box 113, Valdez
8. 6/25/97	ANGELA MC CAULEY	Angela Mc Cauley	Box 3302, VALDEZ
9. 6/25/97	Rebecca Tetz	Rebecca Tetz	Box 1061 Valdez
6/25/97	Margaret Weaver	Margaret Weaver	P.O. Box 2076 Valdez
11. 6/25/97	John Devens	John Devens	Box 865 1317 W. Nor Dean L3 9750
12. 6/25/97	Don Jacobs	Don Jacobs	PO Box 1704 Valdez AK
13. 6/25/97	Pat Caples	Pat Caples	Box 1846, Valdez
14. 6/26/97	Jesse Passin	Jesse Passin	Box 2530 Valdez, AK
15. 6/26/97	Jeanne Passin	Jeanne Passin	Box 2530 Valdez
16. 6/26/97	NEAL OPPEN	NEAL OPPEN	PO Box 3388 VALDEZ AK
17. 6/27/97	Tanya Hannon	Tanya Hannon	PO Box 2422 Valdez AK
18. 6/27/97	Seth Perry	Seth Perry	PO Box 364 VDR AK
19. 6/27/97	Ivano Crowe	Ivano Crowe	PO Box 3532 VDR AK
20. 6/27/97	Garnette Franks	Garnette Franks	PO Box 1651 VDR AK
21. 6/27/97	Loren Bell	Loren Bell	PO Box 764 E. Kenallen AK
22. 6/27/97	H. DAVID BARNUM JR	H. DAVID BARNUM JR	P.O. Box 1336 VDR AK
23. 6/27/97	Kristi Chaffin	Kristi Chaffin	P.O. Box 381 Valdez
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PETITION TO EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

WE, the undersigned, urge the Trustees of the Exxon Valdez Oil Spill Trustee Council to use funds from the Exxon Valdez Oil Spill Settlement to purchase Wayne Blondeau's property located at the mouth of Mineral Creek in Valdez, Alaska. We feel that the purchase of this property would help in the rehabilitation of the species injured by the Exxon Valdez oil spill and would be amongst the most prime scenic and recreational property in the Valdez area.

DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/25/97	Sue McCallum-Blackburn	Sue McCallum-Blackburn	Box 1868 Valdez
2. 6/25/97	Scott M. Benda	Scott M. Benda	Box 2376 Valdez
3. 6/25/97	Melinda A. Mekinda	Melinda A. Mekinda	Box 3104 Vdz
4. 6/25/97	Carol L. Smith	Carol L. Smith	Box 2299 Vdz.
5. 6/25/97	Carrie Doughman	Carrie Doughman	Box 1102 Valdez
6. 6/25/97	Charlotte Berrill	Charlotte Berrill	Box 2193 Valdez
7. 6-25-97	James Rust	James A. Rust	Box 2857 Valdez
8. 6-25-97	Michael J. Bowers	Michael J. Bowers	Box 2556 Valdez
9. 6-25-97	Vern E. Ellwein	Vern E. Ellwein	P.O. 2877 Valdez
10. 6-25-97	Lois Pearce	Lois Pearce	Box 731 Valdez
11. 6-25-97	Jamie Sodergren	Jamie Sodergren	Box 2829 Valdez
12. 6-25-97	Debra Roberts	Debra Roberts	Box 2613 Valdez
13. 6-25-97	Lynne Michaud	Lynne Michaud	Box 52 Valdez
14. 6-25-97	Lori L. Campbell	Lori L. Campbell	Box 1325 VALDEZ
15. 6-27-97	Michael Weber	Michael Weber	Box 2536 Valdez
16. 6-27-97	DANIEL GILBERTSON	Daniel Gilbertson	Box 2408 VALDEZ
17. 6-27-97	GARY SHoop	Gary Shoop	P.O. Box 1955, VALDEZ
18. 6-27-97	Harold E. Blehm	Harold E. Blehm	P.O. Box 1169, Valdez
19. 06/27/97	BONNIE L. GLOVER	Bonnie L. Glover	P.O. BOX 1684, VALDEZ, AK.
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/26	Bene Pickard	<i>Bene Pickard</i>	PO Box 3241, Valdez AK
2. 6/26/97	GRETCHEN DUNKIN	<i>Gretchen M. Dunkin</i>	Box 204 Valdez
3. 6/26/97	Michelle Ferren	<i>Michelle Ferren</i>	Box 827 Valdez
4. 6/26/97	Tom Schantz	<i>Tom Schantz</i>	Box 1224 Valdez
5. 6/26/97	Colleen Stephens	<i>Colleen Stephens</i>	Box 2542 Valdez
6. 6/26/97	James A. Ruscoe	<i>James A. Ruscoe</i>	Box 1862 Valdez
7. 6/26/97	Rosemary Lull	<i>Rosemary Lull</i>	Box 711 Valdez
8. 6/29/97	Sandy Gads	Sandy Gads	Box 1846 Valdez
9. 6/29/97	Thirgil Gilson	<i>Thirgil Gilson</i>	Box 696 Valdez
6/29/97	Jill Nelson	<i>Jill Nelson</i>	Box 2901 Valdez
11. 6/30/97	Cindy Rymer	<i>Cindy Rymer</i>	Box 81 Valdez
12. 6/30/97	DAVID WINNEY	<i>David E. Winney</i>	Box 1063 VALDEZ
13. 6/30/97	GLORIA GILSON	<i>Gloria Gilson</i>	Box 686 VALDEZ
14. 6/30/97	John L. Gilson	<i>John L. Gilson</i>	Box 696 VALDEZ
15. 6/30/97	DAN F. Gilson	<i>Dan Gilson</i>	Box 731 VALDEZ
16. _____	_____	_____	_____
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/24/97	Barbara Bryson	Barbara Bryson	Box 11633
2. 6/24/97	Diane Kinney	Diane Kinney	Box 1502, Valdez
3. 6/24/97	Diane Fair	Diane Fair	Box 3054
4. 6/24/97	Mary Lou S. Wilcox	Mary Lou S. Wilcox	Box 2936
5. 6/27/97	Dorothy E. Wilcox	Dorothy E. Wilcox	Box 81607 Fairbanks, AK
6. 6-24-97	Gregory S. Smith	Gregory S. Smith	Box 2744, Valdez
7. 6-24-97	Becki Komptoff	Becki Komptoff	Box 1055 Valdez
8. 10-24-97	Rose Fong Bae	Rose Fong Bae	Box 3396 Valdez
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 25 June	Ken Orinlan	<i>[Signature]</i>	P.O. Box 1891 Valdez Ak
2. 6/25/97	Gregory R. Williams	<i>[Signature]</i>	Box 3632, Valdez, AK 99686
3. 6-25-97	Shanna Simmons	<i>[Signature]</i>	Box 2825, Valdez AK 99686
4. 6-25-97	M. Joseph Leahy	<i>[Signature]</i>	Box 687, Valdez, AK 99686-0687
5. 4/30/97	Talitha Gregory	<i>[Signature]</i>	Box 1540 Valdez AK 99686
6. 6-30-97	JERRIE CLARK	<i>[Signature]</i>	P.O. Box 221575 Anchorage 9952
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/26/97	Sarah Kupczyk	<i>Sarah Kupczyk</i>	P.O. Box 2103 Valdez AK
2. 6/26/97	Carly Casillas	<i>Carly Casillas</i>	P.O. Box 2630 Valdez AK
3. 6/26/97	Jill Nielsen	<i>Jill Nielsen</i>	P.O. Box 2660 Valdez AK
4. 6-24-97	DONNA FISCHER	<i>Donna Fischer</i>	P.O. Box 395
5. 6-27-97	Peggy Dargatzis	<i>Peggy Dargatzis</i>	P.O. Box 2031 Valdez AK
6. 6/27/97	DWANE JOHNSON	<i>Dwane Johnson</i>	P.O. Box 353 Valdez AK
7. 6/27/97	Jeanne Wilson	<i>Jeanne Wilson</i>	P.O. Box 1014 Valdez AK
8. 6/28/97	Linda Brandenburg	<i>Linda Brandenburg</i>	P.O. Box 1396 Valdez AK
9. 6/28/97	CHRISTINE ANGLE	<i>Christine Angle</i>	P.O. Box 3194 Valdez AK
10. 6/28/97	Karis Wood	<i>Karis Wood</i>	P.O. Box 1136 Valdez AK
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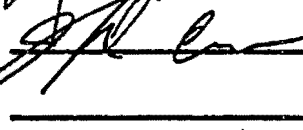
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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6-25	SANDRA BITTNER	<i>Sandra Bittner</i>	PO Box 1717 Valdez
2. 6-25	Cheryl Fleming	<i>Cheryl Fleming</i>	PO Box 1543 Valdez
3. 6-25	LYLE VON BARGEN	<i>Lyle VonBargen</i>	PO Box 870 VALDEZ
4. 6-25	DAVID LEE	<i>David Lee</i>	PO Box 2937 Valdez 99686
5. 6-25	Lisa M. VonBargen	<i>Lisa M. VonBargen</i>	P.O. Box 870 Valdez 99686
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PETITION TO EXXON-VALDEZ OIL SPILL TRUSTEE COUNCIL

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DATE	PRINTED NAME	SIGNATURE	ADDRESS
1. 6/28/97	Ruby Dracka		1017 COLUMBIA AVE PORT CLINTON OH 43452 1107 Columbia Ave
2. 28 July 97	John R. Cresser		Port Clinton OH 43452
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Donna L. Walsh
P.O. Box 1224
1773 Homestead Street
Valdez, AK 99686
(907) 835-5116

July 8, 1997

Ms. Molly McCammon
Executive Director
Exxon Valdez Oil Spill Trustee Council
645 G Street, Suite 401
Anchorage, AK 99501-3451

RECEIVED
JUL 14 1997

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Dear Ms. McCammon:

This letter is regarding the small parcels purchase program implemented by the Exxon Valdez Oil Spill Trustee Council (EVOSTC). As a Valdez resident, I feel very strongly that the 100-acre shoreline property at the mouth of Mineral Creek would be an ideal purchase for EVOSTC. I am currently living near the Mineral Creek shoreline property and I frequently visit the area in question. In my view, the Mineral Creek shoreline property is a perfect candidate for inclusion in the EVOSTC small parcels purchase program for the following reasons:

- 1) The property is home to numerous birds, wild plants, fish and various small mammals. In addition, this land is used by many shorebirds, of which many were affected by the oil spill.
- 2) The property would be accessible to a large number of persons; not only those residing in Valdez but also to the numerous year-round visitors. With so few areas with public access to shoreline in Alaska, this would be a true asset to Valdez; the community most closely connected to the Exxon Valdez Oil Spill.
- 3) The property has an incredible view of the oil tankers as they come and go from the Valdez terminal - perhaps the only accessible place in Alaska where this type of viewing can take place.

Should EVOSTC decide to purchase this property, a marine park could be established which would protect the natural resources in the area as well as serve as a much needed recreation site for Alaskans and visitors. This marine park would allow visitors to view the oil tankers on their voyages to and from the Valdez terminal. An educational program could be implemented to inform users of the sensitive balance of wildlife and how the natural resource extraction industry can be successfully managed to coexist with the protection of the environment.

I strongly encourage EVOSTC to consider the purchase of the property at the mouth of Mineral Creek in Valdez. I have heard that consideration is based on land affected by the oil spill, and that this land is not one that was closely impacted. However, as far as public access is concerned, this land is the closest land to the affected oil spill area that is accessible by road. Therefore, I feel it is the perfect parcel for participation in EVOSTC's small parcel purchase program.

Thank you for your consideration of this request.

Sincerely

Donna Walsh

Donna Walsh

To whom it may concern;

My name is Riesa Harris and I am a citizen of Valdez. I greatly support the New Beach Access idea. I would also like to recognize just about every other citizen of Valdez that is interested in the purchase of this land (But is too lazy to send things). I hope you recognize ~~the~~ our opinions and take them into consideration when choosing ~~the~~ whether or not to purchase this land.

RECEIVED

JUL 11 1997

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Sincerely,

Riesa Harris

Riesa Harris
Box 3354
Valdez, AK 99686



EVOS Trustee Council
645 G St. #401
Anchorage, AK 99501

I would like to urge you to
support establishment of public
lands at the Mineral Creek
Beach area.

This would ~~be~~ a valuable
recreational opportunity for
our community.

Charlie Burrill
Charlie Burrill

Bixby wants support for shoreline park

Bill Bixby, as chairperson of the Alaska State Parks Advisory Board for the Valdez area, asked the council to support purchase of shoreline property, currently owned by Wayne Blondeau, by the Exxon Valdez Oil Spill Trustees Council. Bixby has been organizing a letter drive at the local schools, and other concerned individuals to convince the trustees to purchase the land.

Of the 19 species affected by the oil spill, Bixby said the trustees reported only two living on the property, but Blondeau claims as many as 18 of the species can be found there.

To "sweeten the pot," he asked the council to offer the trustees additional land, donated by the city, adjacent to the Blondeau property. All the land would connect to the new Alaska State Parks trail to Gold Creek, which is accessed at the end of West Egan Drive.

Harris asked the proposition be reviewed by the city's planning and zoning commission, and with that endorsement, he would call for a resolution to promote the purchase of the property by the trustees. Mayor Dave Cobb said he hoped to get the resolution and letters to the trustees by their next meeting set for Dec. 15. In other council news:

- Mayor Cobb proclaimed October Arts and Humanities Month. Kristi Sorenson, vice president of the Valdez Arts Council, and Joe Leahy, director of the Valdez Museum, said they would work together to promote arts and humanities awareness during that month.

Science libraries join forces

ANCHORAGE (AP)—A group of Alaska science libraries plans to open as a new public library here next month to save money by consolidation.

Alaska Resources Library and Information Services will house the collections from seven state and federal agencies, according to Cathy Vitale, one of the librarians. All told, there will be 150,000 books and 700 journals, plus access to CD-ROM and computer data bases.

The library will merge the collections of the Alaska Department of Fish and Game, the Arctic Environmental Information and Data Center of the University of Alaska, U.S. Fish and Wildlife Service, U.S. Geological Survey, Minerals Management Service, Bureau of Land Management and the Oil Spill Public Information Center.

PWS-1056

RESOLUTION 97-75

CITY OF VALDEZ, ALASKA

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA AUTHORIZING THE SALE OF APPROXIMATELY 50 ACRES OF ASLS 79-117, TRACT A TO THE EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL FOR LESS THAN FAIR MARKET VALUE

WHEREAS, the Exxon Valdez Oil Spill Trustee Council is considering the purchase of the Blondeau parcel, PWS 1056, and

WHEREAS, the City of Valdez owns property adjacent to the Blondeau property that has waterfront access and supports many of the injured species, and

WHEREAS, the Exxon Valdez Oil Spill Trustee Council funds the acquisition of land to protect the habitat of injured resources and services to prevent additional injury to resources and services while recovery is taking place, and to provide a long-term safety net for these resources, and

WHEREAS, the property that the City owns has the potential as a living interpretive area that would preserve this habitat and naturally display many species injured during the Exxon Valdez oil spill, and

WHEREAS, the City of Valdez has determined that the best use of this property would be for recreation and as habitat, and

WHEREAS, the City of Valdez wishes to have this City property incorporated with the Blondeau parcel.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Valdez, Alaska that:

Section 1: The City Council hereby agrees to sell an approximate 50 acre parcel as indicated in Exhibit A to the Exxon Valdez Oil Spill Trustee Council for \$10.00 and the following considerations and conditions:

1. The Exxon Valdez Oil Spill Trustee Council purchases the Blondeau Parcel, PWS 1056.
2. The property will be turned over to the Alaska Division of Parks to manage.
3. The property will be managed as a state recreation site.

4. The property will be used and managed for public recreation.

5. The Division of Parks will establish a joint city/state management team to develop management plans for the property.

6. Access to the 50 acres will not be through established residential streets.

Section 2: The Mayor shall be authorized to sign the deed transferring title in the property.

Section 3: A survey and plat of the property will be completed by the Exxon Valdez Oil Spill Trustee Council prior to ownership being transferred.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA this 3rd day of November, 1997.

CITY OF VALDEZ, ALASKA

David C. Cobb
David C. Cobb, Mayor

ATTEST:

Sheri L. Caples
Sheri Caples, CMC, City Clerk

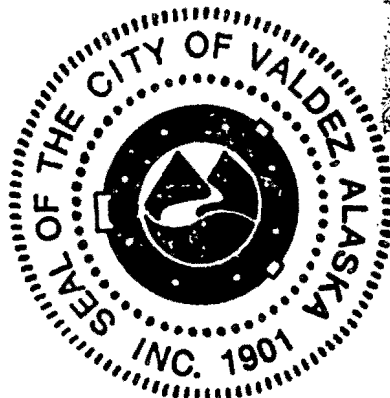


EXHIBIT A
Resolution 97-75

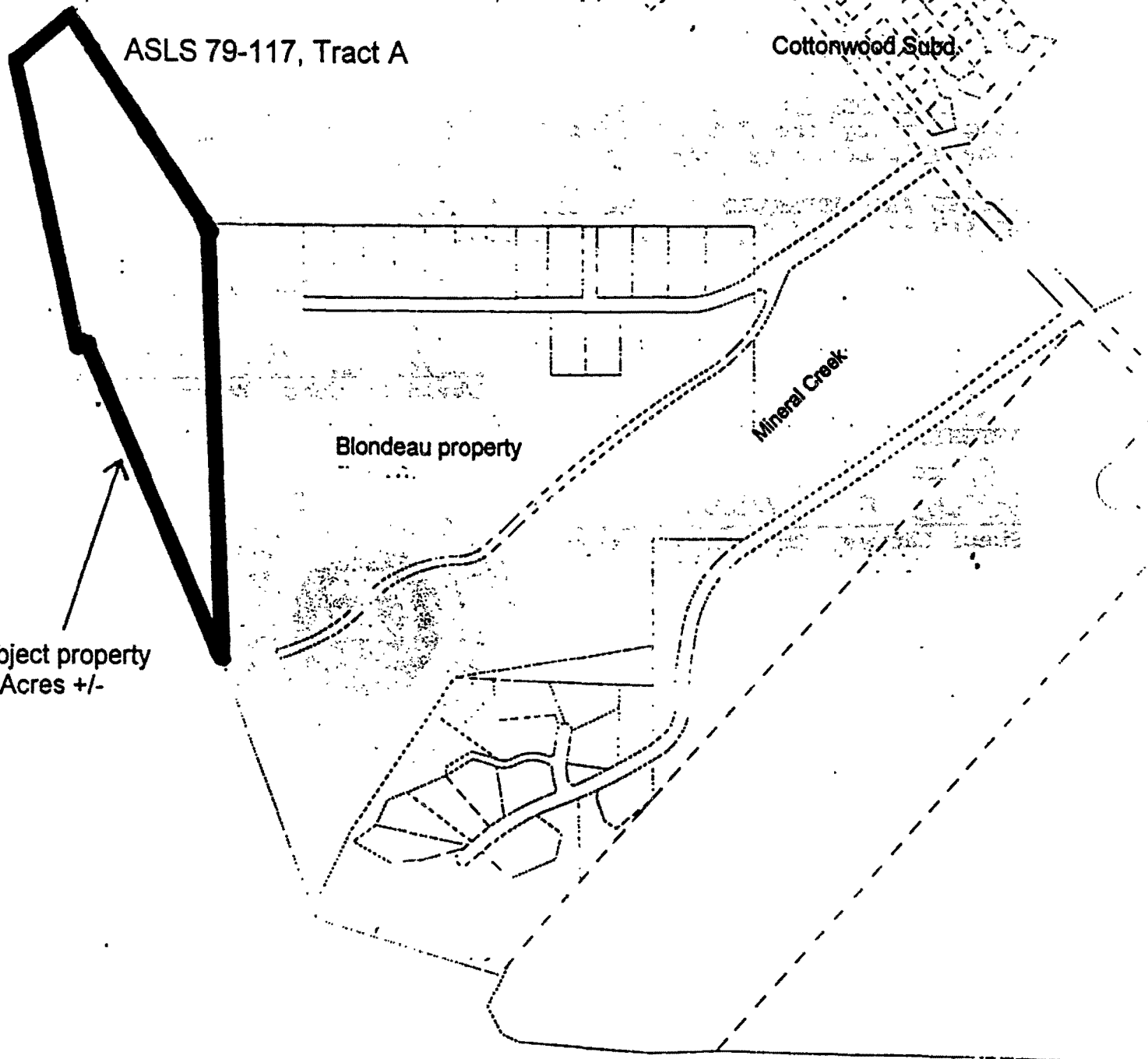
ASLS 79-117, Tract A

Cottonwood Subd.

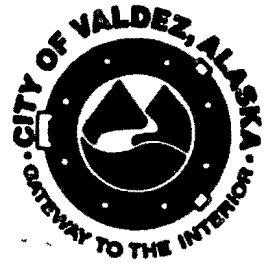
Blondeau property

Mineral Creek

Subject property
50 Acres +/-



MEMORANDUM



TO: Mayor and City Council
FROM: Planning and Zoning Commission
DATE: November 3, 1997
SUBJECT: Donation of portion of ASLS 79-117, Tract A

The Planning and Zoning Commission has reviewed the request to donate a 50 acre portion of ASLS 79-117, Tract A to the Exxon Valdez Oil Spill Trustee Council. The Commission recommends that the property be donated to the Trustee Council with the following conditions:

1. The Exxon Valdez Oil Spill Trustee Council purchases the Blondeau Parcel, PWS 1056.
2. The property will be turned over to the Alaska Division of Parks to manage.
3. The property will be managed as a state recreation site.
4. The property will be used and managed for public recreation.
5. The Division of Parks will establish a joint city/state management team to develop management plans for the property.
6. Access to the 50 acres will not be through established residential streets.

Bixbey Seeks City Donation Of Land...

50 Acres Sought For Park

CITY HALL—A proposal that would add 50 acres of city-owned land to 100 acres of Wayne Blondeau property at the mouth of Mineral Creek for purchase as a state park won the approval of the Planning & Zoning Commission Wednesday night.

Valdez attorney Bill Bixby, a member of the State Park Advisory Board said the donation of 50 acres of waterfront property by the city would "sweeten the pot."

It may be enough, he said, to convince the Exxon Valdez Oil Spill Trustee Council to purchase the adjoining 100 acres owned by Blondeau.

The combined parcel, Bixby told the commission, ideally would be operated as a state park.

He described the site as "prime recreation property, ideal as a trailhead for the new Shoup Glacier trail, and a launching point for kayakers."

City planner Dave Dengel described the 50 acres as part

of the "seismic wave run-up area" at the mouth of Mineral Creek and was not included in the city's master plan for an area of development.

Nevertheless, planning commissioner Jerry Saylor had some misgivings about the donation of city property.

"It gives the impression the city is aiding the sale of for the owner, the ultimate benefactor. Are we putting financial gain on one person at city expense?" he asked.

Commission Chairman John Fanin, said he would go along with two conditions attached:

1. That the trailhead for the Shoup Bay trail not traverse any residential areas.
2. That the city's 50 acres not be "locked up" once donated.

In the end, the commission voted 6 to 0 to recommend to the city council that the 50 acres be donated for park purposes.

Bixby's appearance before the council is phase two of his

effort to convince the Exxon Valdez Trustee Council to acquire the property.

On the first go around, according to Bixby, the property was low-rated by the council.

But Bixby believes that community support, in the form of petitions and letters, and the donation of 50 adjoining acres, might convince the trustee council to give the proposal a higher billing.

The trustee council is charged with spending nearly \$1 billion in settlement funds the Exxon Corp. in the wake of the 1989 oil spill. The funds are dedicated to education and restoration projects in the spill-impacted areas.

In a response to Bixby's proposal, Molly McCammon, executive director of the trustee council said, "These kinds of actions would certainly make acquiring the parcel more interesting from the council's perspective."

Shanna Simmons
P.O. Box 2825
Valdez, AK 99686

RECEIVED
NOV 13 1997

November 6, 1997

**EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL**

Exxon Valdez Oil Spill Trustee Council
c/o Molly McCammon, Executive Director
645 G Street, Suite 401
Anchorage, AK 99501

Dear Ms. McCammon and Trustee Council:

I urge the Exxon Valdez Trustee Council to approve the purchase of land currently owned by Wayne Blondeau.

As a Valdez resident for 7 years, I believe that this land should be a restoration priority in terms of both habitat protection and recreational opportunities in the Valdez area. Personally, I have seen salmon, Dolly Varden, oystercatchers, Canadian geese, sea otters, and black and brown bears using this property and its surrounding waters. In addition, Valdez has very little public waterfront land available for use by the general public. The only public beach in Valdez is very small and frequently crowded; further, it is scheduled to be turned into an expanded small boat harbor.

Valdez was impacted as greatly by the 1989 oil spill as any Alaskan community. Many local residents feel that the EVOS Trustee Council has turned its back on projects in our area in favor of allocating resources to the more organized, highly active communities of Homer, Kodiak, and on the Kenai Peninsula.

The small-parcel purchase request of Wayne Blondeau's land does not require a large allocation when compared to other projects and purchases funded by the EVOS Trustee Council. In addition, the City of Valdez, which strongly supports this purchase, has offered to donate adjacent lands, contingent on an EVOS purchase. Thus, this small-parcel acquisition would be a very effective use of restoration funds.

I urge you to approve the purchase of Wayne Blondeau property, and to more favorably consider other restoration projects for Prince William Sound. Thank you very much.

Sincerely,



Shanna Simmons

LETTERS TO THE EDITOR

THE VALDEZ STAR
NOVEMBER 12, 1997

EXXON PURCHASE

Editor;

Many Valdezans are aware of a small-parcel purchase request to the Exxon Valdez Oil Spill Trustee Council for the purchase of Wayne Blondeau's property past Mineral Creek.

There has been a community-wide effort to make the EVOS trustee council aware of Valdez' support of this purchase.

Specific uses for the land have not yet been determined, but ideas include a public picnic and parking area, kayak put-in, trailhead to the new Shoup Bay trail, and an interpretive state park ranger station.

In a show of support, the City of Valdez has offered to donate adjacent lands, contingent on an EVOS purchase.

These lands are designated wetlands and so could not be used for development.

The purchase request will be considered at the November 18 meeting of the EVOS Trustees in Anchorage. If you support this project, please write to the Exxon Valdez Oil Spill trustee Council, 645 G Street, Suite 401, Anchorage, AK 99501.

Additional information is available from several local businesses, Mayor Cobb, or any of your Alaska State Parks/DNR Community Advisory Board representatives: Bill Bixby, Bill Deppe, Nancy Lethcoe, Richard Chaffin, Shanna Simmons, Pat Welch, Jeanne Passin or Tabitha Gregory.

Shanna Simmons
Valdez

EVOS Trustees land pitch

Williams was the only council member to vote against authorizing the sale of 50 acres of city land to the Exxon Valdez Oil Spill Trustee Council for less the fair market value, as part of a package to entice the Trustee Council to purchase Wayne Blondeau's shoreline property west of Mineral Creek to be used as a proposed marine park.

"We're using public land to try and leverage the purchase of private lands. That bothers me. I just don't feel it is in the best interest of the community," Williams said.

Cobb said the land is "undevelopable" because it is wetland, and there's a federal ban on wetland development. Council Member Lynn Chrystal said the city would still have some control of the land, because the EVOS Council would turn the land over to the Alaska State Parks, which would develop the area according to a joint city-state management plan.

Cobb said the city has a hearing Dec. 18 with the trustee council to discuss the land package.

VALDEZ VANGUARD
NOVEMBER 19, 1997

Trustees take the 'carrot'

■ \$10 wetlands sale entices EVOS council to support Mineral Creek marine park

By Tony Bickert

Valdez Vanguard

The Exxon Valdez Oil Spill Trustees Council, which had previously showed little interest in buying the 100 acres of ocean shoreline at the mouth of Mineral Creek — the site for a proposed marine park — has changed its mind, now that the City of Valdez has offered to throw in another 50 acres for \$10.

Molly McCammon, executive director of the Trustees Council, said Monday that the state portion of council, which holds three of the six seats, will vote on Dec. 18 to have the land appraised, and will encourage remaining council members to do the same. Land appraisal is a key step in the Trustees' small parcels purchase process.

In June, when local members of the State

Parks Citizens Advisory Board began lobbying the Trustees to buy the land — for sale by owner Wayne Blondeau — Trustees director of operations Eric Myers said there was little chance of appraisal, let alone a sale, because the land was not considered high-priority in terms of habitat restoration. Plus, he said the Trustees are backlogged with more than 100 other parcels under consideration and had issued a moratorium on new purchases.

But McCammon said the Valdez City Council's Nov. 3 resolution to sell the Trustees 50 acres of adjacent wetlands for \$10 on the condition that the Trustees buy the Blondeau parcel, got her attention and moved the issue to the front burner.

"Certainly what the city has done makes it a much more enticing parcel," she said. "What we're interested in doing is maximizing the bang for the buck. And when you get a situation like this where the city steps up to the plate and shows its commitment to a parcel, I think the council listens to that and responds."

The Blondeau property, the only beach-

front land in Valdez other than Dock Point, is an ideal site for a state-run picnic area, with pink and silver salmon fishing available from shore, said Valdez Mayor Cobb, a strong supporter of the project.

Bill Bixby, chairman of the state advisory board, said it's also a strategic trail head location; the Shoup Glacier-to-Valdez Trail, to be completed next year, runs through the area. Bixby also wants to establish the spot as a marine trail launch area for kayaks.

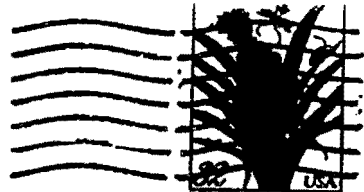
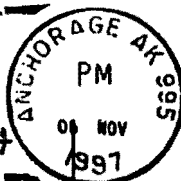
If the council does purchase the property, the State Parks Department would develop and manage the area, Bixby said. The Department of Natural Resources has also shown an interest.

"I don't see the city putting any money into it," Cobb said in June. "It will all be done by the Trustee funds and maintained by State Parks. So, we want to try to get it moved ahead in the process."

The council had voted to sell the \$10 parcel because the wetlands, protected under state and federal preservation laws, are of no developmental use to the city.

"I guess it's kind of a carrot," Valdez Community Development Director Dave Dengel. "But we're not just going to give it to them. They have to buy Blondeau's property. And that would mean some of that Trustee money is spent in Valdez and we get a state park presence down here as well."

Alaskan Wilderness Sailing Safaris offers
naturalist-guided trips in Prince William
Sound from Stan Stephens Growler Island
Camp opposite Columbia Glacier.

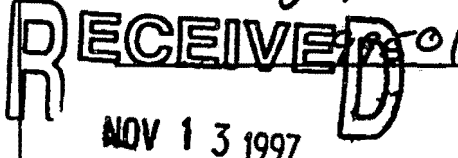


I strongly support
the purchase of the
Blondo property at Mineral
Creek. This property will
provided needed water-
front access to Valdez
residents and visitors.

EVOS Trustee Council

645 G ST #401

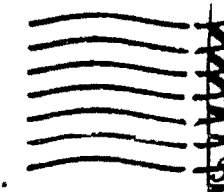
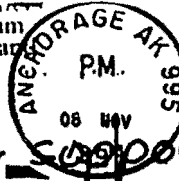
Anchorage, AK



EXXON VALDEZ OIL SPILL
Alaskan Wilderness Sailing Safaris
PO Box 133 Valdez, Alaska 99686
Ph. 907-835-5115 Fax 907-835-5679

Cheryl Jacobs

Alaskan Wilderness Sailing Safaris offers
naturalist-guided trips in Prince William
Sound from Stan Stephens Growler Island
Camp opposite Columbia Glacier.

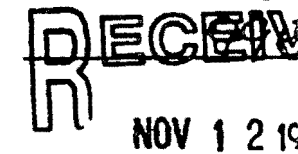


we wholeheartedly support
the EVOS purchase of
the property at the mouth
of Mineral Creek. This
property will provide the
residents and visitors of
Valdez much needed
waterfront access and
parkland. With the City's
support this could be a
great developmental
endeavor. Marc Jacobs

EVOS Trustee

645 G St.

Anchorage



EXXON VALDEZ OIL SPILL
Alaskan Wilderness Sailing Safaris
PO Box 133 Valdez, Alaska 99686
Ph. 907-835-5115 Fax 907-835-5679



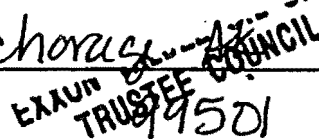
I do support the
purchase of the
Blondear
property.
Robin Whaley
Box 3355
835-4478

Post Card

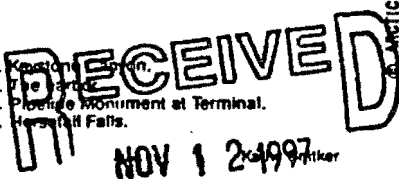
EVOS Trustees

645 G St #401

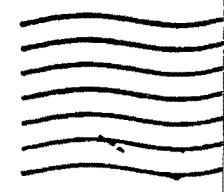
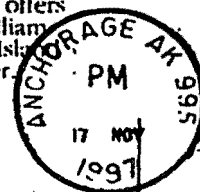
Anchorage, AK



Right to Life: 1. Kachemak Bay.
2. The Sound.
3. Pleasure Monument at Terminal.
4. Herring Falls.



Alaskan Wilderness Sailing Safaris offers
naturalist-guided trips in Prince William
Sound from Stan Stephens Growler Island
Camp opposite Columbia Glacier.



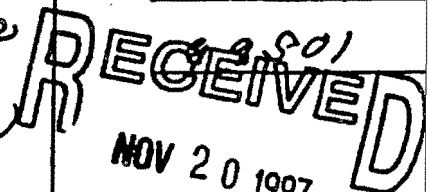
I support the
purchase of land
at the mouth of
Mineral Creek for an
additional recreation
area.

Lonnie Green
PO 382
Valdez, AK.

EVOS TRUSTEE

645 G ST.

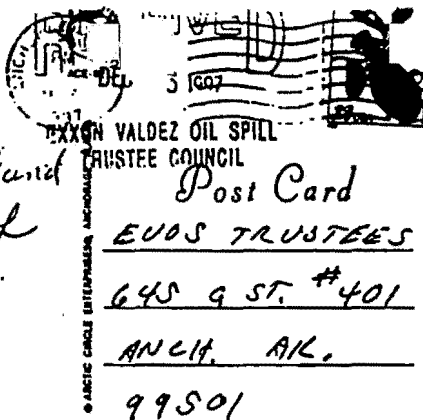
ANCH, AK



EXXON VALDEZ OIL SPILL
Alaskan Wilderness Sailing Safaris
PO Box 133 Valdez, Alaska 99686
Ph. 907-835-5115 Fax 907-835-5679



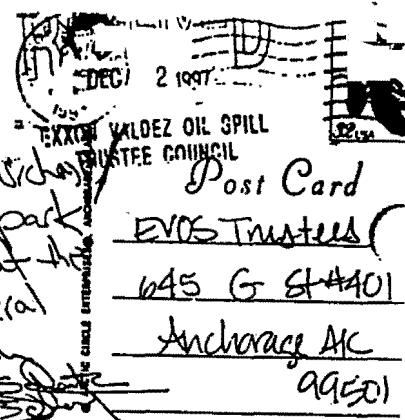
I support the
purchase of land
at the mouth of
Mineral Creek.
Karen Hodges
Valdez AK 99686



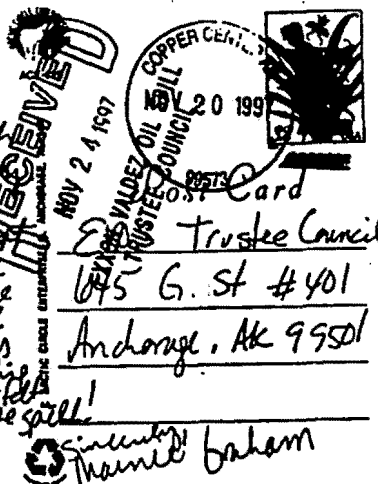
ALASKAN BLACK BEAR
Photo by © Michael DeYoung/Alaska Stock Images



I support
the (you) purchase
Creation of a park
ON the land at the
mouth of Mineral
Creek. Sincerely
Tammy
Kathy Shoop



I fully support
purchase of land at mouth
of mineral creek in Valdez
out of all the purchases
of land & land rights
EVOS trustees have made
so far, this would be one
of the more meaningful
ones & would help citizens
of Valdez feel a sense of relief
which they so far have not felt
since the spill!



WORTHINGTON GLACIER
Worthington Glacier is a notable landmark along the
Richardson Highway.
Photo by: © 1992 Ken Graham Photography



Dear EVOS Trustees
If you know Valdez, you
will know that the land at
the Mouth of Mineral Creek
would be excellent public
lands for protected habitat
and low impact recreation - the
perfect complement to the new
Shoop Bay Trail. Why not bring
something special from the whole
shaking Exxon mess to the people
of Valdez. Judy Kitagawa
American held region. Many areas in Alaska are home to
these majestic birds.

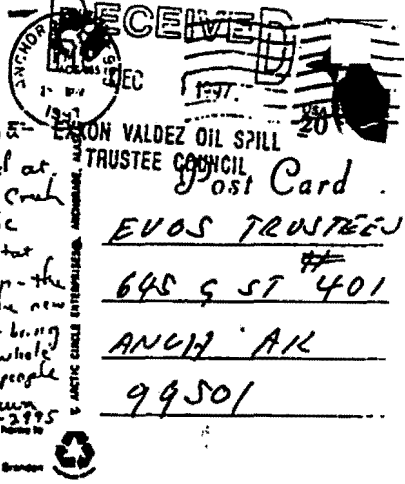


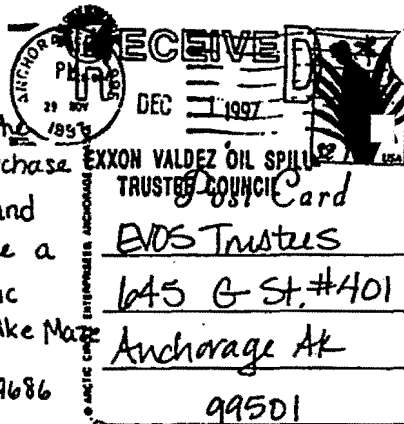
Photo by Randy Brander

PLEASE PURCHASE THE LAND AT THE MOUTH OF
MINERAL CREEK. SO MANY PEOPLE WOULD BENEFIT.
THE BEACH AREA LOCATED AT DOCK POINT IS JUST
NOT ADEQUATE FOR BOAT/KAYAK LAUNCHING WHEN
SOMEONE WANTS TO TRAVEL WEST (OUT THE BAY).
HAVING TO TRAVEL AROUND SERVES VESSELS AND
SMALL BOAT HARBOR TRAFFIC IS A SAFETY/TIME
ISSUE.

THANK YOU,
GARY SHOOP



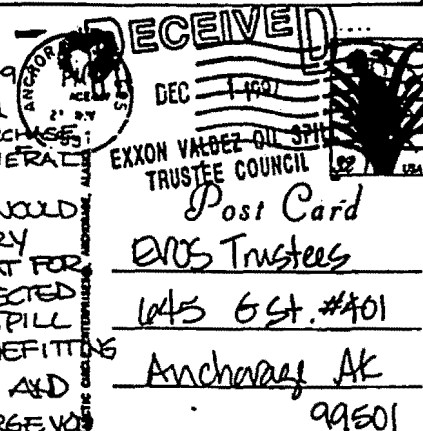
We would like to see the
Trustees Council purchase
the "mineral creek" land
in Valdez to become a
park area for public
use. Jill Hellar/Mike Maza
POB 7191
Valdez AK 99686



HARBOR WHALES TAIL
Humpback whales tail with a second whale appearing in
the middle passage.
Photo by © John Hyatt/Alaska Stock Images



THIS POSTCARD IS IN
SUPPORT OF THE PURCHASE
OF THE VALDEZ/MINERAL
CREEK PROPERTY.
THIS PURCHASE WOULD
PROVIDE NECESSARY
PROTECTED HABITAT FOR
SHOREBIRDS AFFECTED
BY THE EXXON SPILL
AS WELL AS BENEFITING
VALDEZ RESIDENTS AND
VISITORS. I URGE YOU
TO CONSIDER
THIS PURCHASE.
THANK YOU.

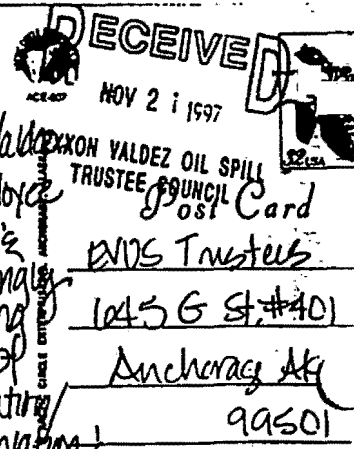


Right to Left: 1. Kayak Canyon
2. The Harbor
3. Pipeline Monument at Terminal
4. Harbortail Falls

Donna Washburn



As a member of the Valdez
Trails Assoc. & an employee
of the local convention &
visitors bureau I strongly
support EVOS purchasing
land near the mouth of
Mineral Creek for restoration/
preservation
public access.

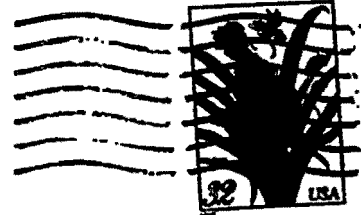
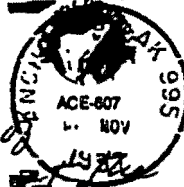


Right to Left: 1. Kayak Canyon
2. The Harbor
3. Pipeline Monument at Terminal
4. Harbortail Falls

Kathy Shoop



11/15/97



I support your purchase of private waterfront land Mouth of Mineral Creek, Valdez, AK for use as recreational land. I support this only if it is only minimally developed, & if maintenance money is somehow set up & especially if control & planning for property is not given over to a City of Valdez entity. They are too prone to radically

- Right to Left: 1. Keystone Canyon.
2. The harbor.
3. Pipeline Monument at Terminal.
4. Horsetail Falls.

overdevelop & have little sense of ecological balance & protection. State Parks would be much better to oversee it. Thank you.
Donna Lane Box 2581 V.

Post Card
EVOS Trustees

645 G St # 401

Anchorage AK 99501

Talk of Cordova purchase angers Murkowski

By JIM CLARKE

Associated Press Writer

ANCHORAGE (AP) — U.S. Sen. Frank Murkowski and a Native corporation are accusing the Exxon Valdez Oil Spill Trustees Council of trying to block access to timbered land near Cordova the corporation owns.

But the head of the trustees council says that's just plain wrong.

Council Executive Director Molly McCammon admits that she sat down with the U.S. Forest Service and several environmentalists earlier this month to discuss a plan that critics said would have slowed or stopped development near Carbon Mountain.

The proposal, which biologist and former Cordova resident Rick Steiner pitched, would have seen trustees council use some of \$100 million settlement from Exxon Corp. to buy subsurface rights under forest land Chugach

Alaska Corp. owns.

But McCammon said the trustees council staff dismissed the suggestion quickly because the area, about 60 miles east of Cordova, is outside the boundaries where the council is allowed to operate.

"We had a meeting, they presented some information, but there are no negotiations going on," she said. "It wasn't obvious to me that there wasn't a case to be made" that buying the land would help restore land and species damaged in the 1989 oil spill, she said.

Buying the subsurface rights from the South Korea company that now owns them would have complicated and slowed Chugach Alaska's efforts to negotiate an easement across the Chugach National Forest to its timber lands, a Murkowski spokesman said.

Chuck

Kleeschulte,

Murkowski's press secretary, said the plan appears to be an effort to stop Chugach Alaska altogether.

The Native corporation sees it the same way. "The trustee council and the Forest Service have openly discussed something like this to keep us from getting our easement," said Mark Stahl, the corporation's land and resources manager. "It's just outrageous that the Forest Service would be trying to frustrate a mandatory obligation, which this easement is."

Like McCammon, Forest Service spokesman Doug Stockdale said the agency is not considering the proposal. Instead, it is working to give Chugach Alaska a 27-mile easement across the national forest so the Native corporation can harvest timber on the 73,000 acres it owns.

"I think there was a misperception about an event that occurred," Stockdale said.

Chugach Alaska is hoping to complete the logging road next summer and begin logging the spruce and hemlock forest in 2000, Stahl said.

The corporation has been ne-

gotiating with the Forest Service since 1982 for the easement. Frustrated that the process had taken so long, Murkowski last week introduced legislation requiring the Forest Service to grant the easement by Dec. 11. Stockdale said the agency expects to meet that deadline.

Steiner, who sparked the controversy, hasn't given up hope that he can stop logging on the land. Development on the slopes of Carbon Mountain would threaten a silver salmon run on the Bering River, would endanger habitat for birds, bear and other species, and would harm one of Alaska's unique natural areas, he said.

Steiner had sharp words for the trustees council. "They have wasted hundreds of millions of dollars on useless science," he said.

"This is the most significant restoration opportunity the trustee council has left ... but they're reticent to do anything bold."

Murkowski, meanwhile, has sent a letter to U.S. Agriculture Secretary Dan Glickman demanding an explanation for why the Forest Service would consider a plan to keep Chugach Alaska from its land.

Murkowski angry with spill trustees over Cordova

By Jim Clarke

The Associated Press

area purchase talk

ANCHORAGE — U.S. Sen. Frank Murkowski and a Native corporation are accusing the Exxon Valdez Oil Spill Trustee Council of trying to block access to timbered land the corporation owns near Cordova.

But the head of the council says that's just plain wrong.

Council Executive Director Molly McCammon admits that she sat down with the U.S. Forest Service and several environmentalists early last month to discuss a plan that critics said would have slowed or stopped development near Carbon Mountain.

The proposal, which biologist and former Cordova resident Rick Steiner pitched, would have seen the trustee council use some of its \$900 million settlement from Exxon Corp. to buy subsurface rights under forest land Chugach Alaska Corp. owns.

But McCammon said the trustee council staff dismissed the suggestion quickly because the area, about 60 miles east of Cordova, is outside the boundaries where the council is allowed to operate.

"We had a meeting, they presented some information, but there are no negotiations going on," she said. "It wasn't obvious to me that there wasn't a case to be made" that buying the land would help restore land and species damaged in the 1989 oil spill, she said.

Buying the subsurface rights from the South Korea company that now owns them would have complicated and slowed Chugach Alaska's efforts to negotiate an

easement across the Chugach National Forest to its timber lands, a Murkowski spokesman said.

Chuck Kleeschulte, Murkowski's press secretary, said the plan appears to be an effort to stop Chugach Alaska altogether.

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The Anchorage Times

Publisher: BILL J. ALLEN

"Believing in Alaskans, putting Alaska first"

Editors: DENNIS FRADLEY, PAUL JENKINS, WILLIAM J. TOBIN

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ANCHORAGE DAILY NEWS
"VOICE OF THE TIMES"
JUNE 12, 1998

Private enclave

AS FAR AS the Wildlife Management Institute is concerned, the U.S. Forest Service is a government unto itself — and should be impervious to intrusions by know-nothing congressmen and at least one federal agency. Alaska Sen. Frank Murkowski and Rep. Don Young particularly infuriate the institute. Good for Murkowski and Young.

The ire of the professional greens has been raised by the efforts of the two Alaskans to impose public sanity on a major federal bureau that in recent years has walked more and more in lock-step with the environmental parade.

Witness this from Lonnie L. Williamson, editor of the April issue of the Outdoor News Bulletin of the Wildlife Management Institute: "In Congress, there is a cadre of western senators and congressmen who apparently live to harass the U.S. Forest Service as the agency attempts to curb exploitive timber cutting and destructive road building. That most Americans are aware that our national forests have been overcut since World War II apparently does not concern these elected officials."

With good reason. To imply that all the national forests have been over cut and subjected to destructive road building is a gross misstatement — as the enormous and untouched regions of the Tongass National Forest in Alaska amply demonstrate.

Murkowski and Young — along with Sen. Larry Craig and Rep. Helen Chenoweth, two Idaho Republicans — took issue with the Forest Service when its head man, Mike Dombeck, ordered an 18-month moratorium on road construction in even those limited areas of national forests where such roads could be built. They threatened to chop off Forest Service funding if it continued to try to stop road building in timber country.

Sobbed the Wildlife Management Institute: Murkowski and Young on April 3 "sent yet another threatening letter to the Forest Service. This time the missive was to Ag Secretary Dan Glickman complaining that Chief Dombeck and a host of other Forest Service employees likely are guilty of violating numerous Senate and House rules and federal statutes for lobbying to get public support for various legislative proposals."

But things are tough all over, as the institute's newsletter noted. "While the Forest Service tries to keep Congress from screwing things up on one side, it must contend with administration meddling on the other." It cited the President's Council on Environmental Quality as an offender, "sticking its nose into management decisions on individual forests."

Asked the newsletter editor: "What does CEQ know about managing a national forest? Not much, I expect."

To hell with the public, in other words. The nation's forests belong to the inside experts. Everybody else bug out.

Letters to The Times

Trustees just doing job

It's remarkable how someone who wasn't present can describe an event in ways that people actually there wouldn't recognize. In a recent editorial ("Trust Betrayed" May 31, 1998), The Voice of the Times accused the Exxon Valdez Oil Spill Trustee Council of holding a meeting and "attempting through devious means to block the Chugach Alaska Corp. from developing some of its timber resources."

Indeed, there was a meeting on May 4 at the Restoration Office, but it wasn't a meeting of the Trustee Council. Rather, there was a request on behalf of several conservation organizations to meet and discuss an idea involving the possible purchase of land interests in the vicinity of the Copper River Delta that they felt could benefit the recovery of biological resources injured by the Exxon Valdez oil Spill.

At the May 4 meeting, I specifically pointed out that the lands in question are outside the spill-impact area as defined

in the Restoration Plan adopted by the Trustee Council in 1994 and that the Trustee Council has no plans to purchase lands outside of the spill impact area. To be absolutely clear: At no time during the meeting did any state or federal agency representative propose, encourage or endorse any effort to delay the ability of Chugach Alaska Corp. to pursue its efforts to access its timber resources.

As the land management agency for the region in question, the U.S. Forest Service has indicated that it may be interested in taking a closer look at the lands in question. But, contrary to what The Times asserted as fact, the Trustee Council did not meet on May 4; has given no direction or authorization to pursue purchase of lands in the Carbon Mountain area; has approved no settlement funds to support such an effort; and, has never indicated any support for any activity to in any way block Chugach Alaska Corp. from developing its timber resources.

The joint federal-state civil settlement that established the Trustee Council specifically provides that there shall be

meaningful public participation. This includes listening to the public and allowing people the opportunity to express their ideas. The Restoration Office will always take public comment and meet with persons who are interested in restoration activities. The fact that a meeting requested by members of the public took place, however, should not be misrepresented by The Times as a commitment or endorsement on the part of the Trustee Council for a particular course of action.

The Times editorial could be dismissed as silly were it not for the seriousness of the charge leveled — that the trustees have betrayed their trust obligations. The Times was wrong and could have avoided its error with minimal fact-checking. The Trustee Council has a duty to listen to the public as part of its responsibility, even if that means listening to people who advocate ideas The Times does not support.

Molly McCammon
Executive director
Exxon Valdez Oil Spill Trustee Council

Archeology center slated for peninsula

PENINSULA CLARION
6/21/98

By SHANA LOSHBAUGH
Peninsula Clarion

A regional "archeological repository" is in the planning stages and likely to end up on the Kenai Peninsula.

The Exxon Valdez Oil Spill Trustees are soliciting proposals this summer for the facility, which will house Native artifacts salvaged during the oil spill cleanup starting in 1989.

The project involves eight communities and may cost as much as \$2.8 million. It is scheduled for completion by Sept. 30, 2001.

The repository project is unusual because it partners remote villages with state-of-the-art museum technology. The repository will serve as a central museum and sponsor eight satellite exhibits to rotate among the other communities.

The EVOS trustees have taken the unprecedented step of issuing a request for proposals. Prior to this project, the trustees have only considered proposals from others and not put out guidelines on their own.

The trustees stipulate that the repository must locate in one of the following communities in Prince William Sound and on the Kenai Peninsula affected by the oil spill: Chenega Bay, Cordova, Nanwalek, Port Graham, Seldovia, Seward, Tatitlek or Valdez. People involved with the project say Seward is the most likely site for the project for reasons of access and tourist traffic.

Guidelines require that the repository be open to the public, become financially self-sufficient, work closely with the villages involved and use professional museum curators and preservation

techniques.

The project's purpose is to increase awareness and appreciation of the cultural heritage of people in the spill area. The council expects the repository to sponsor education programs and projects to restore and protect archeological sites, according to the request document.

Nearly all of the 1,489 items in the EVOS collection are in the Chugach, or Pacific Eskimo tradition. They were made by the ancestors of present-day villagers in Tatitlek, Chenega Bay, Nanwalek, Port Graham and Seldovia. Most are stone tools.

During the oil spill, human traffic overran previously isolated sites. In addition to damage from oil or cleanup procedures, intruders vandalized many sites. Damage affected Prince William Sound and the south Kenai coast all the way to Dogfish Bay near Nanwalek.

Salvaged items went to the University of Alaska at Fairbanks for temporary safe keeping.

Committees from the eight communities, Native corporations, archeologists and museum professionals have been meeting and discussing the collection for years.

Last year, Chugach Alaska Corporation, the regional Native corporation, sent the oil spill trustees a proposal for housing the artifacts in Seward, in the new Chugach Heritage Center, then withdrew it.

"It's a very sensitive issue for all the villages," said Chugach President Michael E. Brown.

The corporation decided to step back and let local groups work out details among themselves, he said.

See NATIVE, back page

and will not submit a proposal this year.

The EVOS trustees have had many discussions with Native groups over proper handling of the artifacts, said Veronica Christman, who is handling the bid process for the trustee council. They decided dividing the small collection among the eight communities would be inefficient and complicate long-term preservation. Inspired by the success of the Alutiiq Museum they funded in Kodiak, they decided to return the items to the villages as much as possible.

The trustees settled on the idea of a central repository and traveling

exhibits to the other communities. The guidelines set maximum costs as \$1 million for the central repository, \$1.6 million (\$200,000 each) for display facilities in the eight outlying areas and \$200,000 to put together traveling exhibits.

Seldovia, for example, is not in the running for the repository but would like to have a display case, said Lillian Elvsas, who is working on the project for the Seldovia Native Association. She envisions using the display for SNA's own artifacts, too, and sending them around the region in educational partnerships with facilities such as the Pratt Museum in Homer and the Alaska SeaLife Center in Seward.

Enthusiasm for the project is high, said Lora Johnson, an archeologist and director of tribal development and operations for

Chugachmiut. The Anchorage-based nonprofit Native service organization is working on a proposal. They requested — and won — a one-month extension of the proposal deadline, which is now set for Aug. 7.

"We are really excited about this," she said. The community involvement and return of the artifacts to the villages has great educational and cultural significance. She sees the archeology project as an opportunity to bring some good out of the tragedy of the oil spill.

Intense behind-the-scenes negotiations are under way throughout the region to determine partnerships and who will submit proposals.

Finances are a challenge, because the winning bidder must commit to operating the repository for at least 20 years, Christman said. And deciding which community will host the main facility "is one of the most difficult aspects," she said.

Chugachmiut has not chosen a site, Johnson said.

But the Traditional Village of Eyak intends to submit a proposal to house the repository in its hometown of Cordova, said Eyak Traditional Council President Bob Henrichs.

The Chenega Corporation also is interested, with its tourism director, Dale Fox, spearheading a proposal. It is working with the Tatitlek vil-

lage corporation and Chugach Alaska. Seward is its preferred site.

"We are intensely looking at it," said Chenega's general counsel, John Hoffer. "We're spending an awful lot of time and effort. It's a lot of work to make a museum."

The Pratt Museum in Homer is not submitting a proposal, said curator Betsy Webb, but is interested in cooperating on related projects.

Christman said the trustees council expects several proposals. They've even had inquiries from out of state, she said. All proposals will be kept confidential until after the final grant award, which is tentatively scheduled for the end of September.

City, Museum, EDC Begin Push...

Maritime Museum Seen For Valdez

VALDEZ--There's a move afoot in Valdez to create a maritime museum that would highlight the role of Valdez in the North Pacific ranging from the early explorers Cook and Fidalgo to modern times.

Laying the groundwork for the project is Sue Cogswell of the Prince William Sound Economic Development Council,

Pete LaPella, chairman of the Valdez Museum board and Mayor Dave Cobb.

In early June they brought two architectural firms to Valdez for a preliminary look at Valdez as a potential site for a maritime museum.

Both firms, E.C.I.-Hyer of Anchorage and Olsen-Sundberg of Seattle have previous experience at designing museums,

according to Ms. Cogswell.

In addition to a shore-side museum, the group is also reaching out to the U.S. Coast Guard for the donation of the cutter Storis to the city to become part of the museum.

The cutter Storis, homeported in

Continued on page 6

Kodiak, is the oldest in the
Continued from Page 1

Coast Guard, dating back to the 1940s.

Mayor Cobb sees a maritime museum here as another potential boost for tourism. The museum, he said, could be promoted in conjunction with the Sea Life Center in Seward and the Historical Aircraft Museum in Anchorage.

Ms. Cogswell says a maritime museum could help make Valdez "more of a visitor destination."

There is no formal plan yet, nothing in writing, no agenda, no funding sources, no selected site. That's expected to change in the weeks ahead when Mayor Cobb appoints a task force to begin the long process.

In brainstorming the idea, LaPella and Ms. Cogswell see the potential for four museum galleries:

1. One gallery could house artifacts from Prince William Sound.

2. A second gallery that would focus on the Native maritime culture.

3. Another gallery would highlight commercial maritime activity ranging from early sealing and whaling endeavors to salmon fishing, the oil tanker industry and cruise ships.

4. The fourth gallery would feature the history of military marine activity in the North

Pacific and Prince William Sound.

LaPella is cautious about getting too far out in front of the project. "It's pretty low key right now," he says, but quickly adds, "It's a good common cause of the entire community."

Ms. Cogswell agrees. Valdez would be "a fantastic place" for a maritime museum, she says.

Exxon trustees consider artifacts display

The Associated Press

KENAI — A regional "archaeological repository" is in the works and likely will be built somewhere on the Kenai Peninsula.

The Exxon Valdez Oil Spill Trustees are soliciting proposals for the facility, which will house Native artifacts salvaged during the oil spill cleanup beginning in 1989.

The project involves eight separate communities and could cost about \$2.8 million, officials said. It's scheduled for completion by September 2001.

The repository project is unusual because it links remote villages with state-of-the-art museum technology, officials said.

The repository will serve as a central museum and will sponsor eight satellite exhibits to rotate among the other communities, officials said.

Trustee guidelines require that the repository be open to the public, become financially self-sufficient, work closely with the villages involved and use professional museum curators and preservation techniques.

The project's purpose is to increase awareness and appreciation of the cultural heritage of people in the spill area, officials said.

The council expects the repository to sponsor education programs and underwrite projects aimed at

restoring and protecting archaeological sites.

The trustees stipulate that the repository must be located in one of the following communities in Prince William Sound and on the Kenai Peninsula affected by the oil spill: Chenega Bay, Cordova, Nanwalek, Port Graham, Seldovia, Seward, Tatitlek or Valdez.

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Bay, Nanwalek, Port Graham and Seldovia. Most are stone tools.

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Alaska Coastal

Currents

By Jody Seitz

KODIAK DAILY MIRROR
MAY 29, 1998

Scientists read harbor seal's life in blubber

Like Egyptian hieroglyphics, the story of the harbor seal decline may be in plain sight. Recently scientists learned to read the language of harbor seal blubber, and it's telling a story of their travels and their diets.

Since 1985 harbor seals have been disappearing from the islands and mainland shores of Prince William Sound. It's estimated that 300 seals were killed by crude oil from the T/V Exxon Valdez in 1989, a hard blow to a species that was already in a serious decline.

The spill's impact notwithstanding, whatever was depressing the seals' numbers still exists. Though they thrive in Southeast Alaska and may have stopped declining in Kodiak, in Prince William Sound the population is 35 percent lower than it was in 1989.

Evidence of a major shift in the abundance of several fish species in the Gulf of Alaska, along with corresponding declines in seabirds and sea lions, leads scientists to believe that the reason for the decline in seals is related to their food.

Sara Iverson, of Dalhousie University, in Canada, was studying fur seal pups in Nova Scotia when she noticed that mother seals transferred huge quantities of fat to their young through their milk. She began looking at the chemical composition of the fat. When an animal digests food, sugar and protein are broken down, but the fatty acids can remain intact. Fatty acids are like the building blocks of fat.

Iverson saw that the fatty acids in the milk of mother seals differed according to where they lived and what they ate. "It was so identifiable that I started to come up with the idea to use fatty acids in the predator as an indicator of the kind of prey that they were consuming," she said.

Now they are able to identify the prey by species, using its fatty acid "signature," with 98 percent accuracy. They also can tell its relative size and where the prey was taken, which makes it possible to tell how the seal's diets change depending on location. "The animals in southern Prince William Sound feed very differently than the animals in northern Prince William Sound," Iverson said.

According to Iverson, using data gathered in 1994 and 1995, researchers were able to identify a seal by the cove it's been hauling out in, separated by about 15 kilometers. Seals feeding on pollock in northern Prince William Sound will have a different signature from those feeding on pollock in the southern Sound.

"What this means is that where seals haul out is probably a good indication of where they're feeding and the prey base they depend on," said Iverson.

Some of the fishes most in decline are the high fat content "forage" fish species such as capelin, eulachon, and sand lance. And, in 1993, the Prince William Sound herring population crashed and is still at fairly low levels. These species may be critical for harbor seal pups.

"One of the theories is that some of these forage fishes might have declined rapidly and the stress may be on the juveniles," said Iverson. The pups are just learning how to find food, so they might not be able to capture or eat the faster larger prey. "They may simply depend on some of these smaller forage fish whereas the adults can capture larger prey, the larger pollock and herring," she said.

Research on pups and their diets will begin at the Alaska SeaLife Center in 1998. Scientists will continue to monitor their populations in the wild.

Alaska Coastal Currents

By Jody Seitz



Researchers discover cutthroat trout cycles

Cutthroat trout surviving in the streams and lakes in the Prince William Sound region are the northern-most members of this species. As with other species at the limit of their range, these trout are likely to be more sensitive to changes in their environment, whether natural or from human activity.

After the T/V Exxon Valdez accident nine years ago, spilled oil eventually coated beaches at the mouths of trout streams throughout the western sound. The Alaska Department of Fish and Game determined that the oil might have caused injuries to both Dolly Varden and cutthroat trout.

The Exxon Valdez Oil Spill Trustee Council was interested in developing a recovery program for the fish, but first researchers needed to learn more about the trout. Two forms of cutthroat trout live in the sound. Resident trout spend their entire lives in freshwater, usually in lakes at the heads of streams. Anadromous cutthroat trout spend the first two to three years of their lives in freshwater before migrating downstream to saltwater. Then they'll make several forays back and forth between the saltwater and their home streams.

In 1996, Dr. Gordon Reeves, research biologist with the U.S. Forest Service Pacific Northwest Research Station in Corvallis, Ore., began a project to find out the genetic relationships among the two types of trout and the sea-run trout of neighboring streams. Until this research, no one knew the relationship between resident and anadromous trout.

While assessing injuries from the oil spill, biologists learned the

locations of many trout streams. But, when this study began, biologists had to walk stream after stream to find enough of the fish to study. They found cutthroat in streams which they weren't thought to inhabit; other streams held too few trout for any to be taken for research.

After two years, Reeves found that it was unlikely that anadromous trout from one stream would repopulate the streams polluted by oil. Sea-run cutthroat trout do not stray and are more distinct genetically than most other species of salmon.

"There's very little interaction among the populations as far as we can tell, from the genetic perspective," said Reeves. "The populations of cutthroat in the sound contain a high amount of rather unique information. If you look at other [salmonid] fishes, coho, sockeye or chinook, there's unique information, but it's much lower compared to the cutthroat trout."

Reeves' analysis shows recovery could occur in another, perhaps surprising way. It turns out that freshwater dwelling cutthroat can produce trout that run to the ocean. "The resident parent can give rise to or produce anadromous individuals," said Reeves. "And so in some cases, where you have depressed stocks, it may be that recovery is going to come from this other life history form that provides not just resident fish, but anadromous fish."

For restoration, this largely indicates a path of caution with regard to this species. All that may be possible is to regulate the harvest, protect the habitat, and leave the trout alone.

Eyak residents learn how to improve salmon habitat in local streams

By Jody Seitz

Three years ago, the Native Village of Eyak enlisted the aid of the U.S. Forest Service to help them

improve the meager salmon runs in eastern Prince William Sound and at the same time teach young adults about their lands and about resource management.

Six Eyak residents, ages 18 to 25, started by surveying every inch of habitat along each of 11 streams, from their mouths to their headwaters. Ken Hodges, of the U.S. Forest

Service, coordinated the project.

There's a reason why so few coho salmon return to the streams of eastern Prince William Sound, according to Hodges. The streams are really rough. "The mountains are pretty high and up in the higher areas it's raining a lot," said Hodges. "It's common to see high water marks about three to four feet above where you're walking along the stream bed. So that water is really gushing and a fish can't live in there unless it has a lot of sheltered areas."

There are many stages in a coho salmon's life. Each one requires its own special habitat to survive. The adults need well-sorted clean gravel, half an inch to as much as two inches in diameter, for spawning. "Juveniles fresh out of the eggs like the quiet backwater pools to rest and grab a few bugs off the surface," said Hodges. "Those a little older can take more of the higher flows but they too mainly use pools for their habitat."

But, in the wintertime, both fry and the older juveniles need sheltered spots. "They need places where they can get out of the main velocities of the stream and down into the sticks and logs, some place out of the way where they can just

rest and hunker down for the rest of the winter," said Hodges.

During their habitat surveys, the Eyak crew measured the different types of habitat present in each stream. Then they put their numbers into a production model to see what factors were limiting coho production in each of the streams. The deep, quiet, protected pools were in short supply.

Of all the streams they walked, Plateau Creek, in Port Gravina, looked like the stream with the best chance of success. "It was a smaller creek. The flows weren't quite as high and as wild as some of these other places and if we put habitat structures in there there's a chance they'd be blown out by high flows," he said.

To make deep quiet pools and backwaters they anchored logs and placed boulders in the streambed. This is the first winter for the habitat improvements. If they hold, residents can expect to see more coho salmon in coming years.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Coastal currents

Forest Service works to promote second-growth forest

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing recovery within the spill region.

By JODY SEITZ

Many of the species injured by the Exxon Valdez oil spill depend upon mature forests for habitat. Since 1985, approximately 19,768 acres of old growth forest have been clear cut in Prince William Sound. As these timber harvests are completed, the U.S. Forest Service is looking for ways to help the land owners manage the newly cut areas for wildlife.

With no tried-and-true formula for helping the forest regenerate quickly in the northerly and rainy Prince William Sound, silviculturists are looking to the experience of Southeast Alaska foresters to model experiments promoting second growth.

Using funds from Exxon's criminal settlement with the government, Sue Kesti, of the Forest Service's Cordova Ranger District, developed a treatment plan for an old clearcut on Montague Island. The purpose of the project was to develop some

guidelines for managing second-growth forests to help injured species recover.

The plan identified the habitat needs for bald eagles, river otters, marbled murrelets and harlequin ducks. Fish species such as Dolly Varden, cutthroat trout, sockeye and pink salmon also may benefit.

The project should result in a plan that can be used by private land owners to develop second-growth forests. "In 10 and 20 years, they can look and say, here's some things to try," said Kesti.

The area to be treated is second-growth forest around Swamp Creek, about two miles south of Port Chalmers. About 360 acres were harvested there from 1970-1974.

The forest is growing back, but the trees are too crowded, with some pockets with over 2,000 stems per acre.

"You can't even walk through it, that's how thick it is," said Kesti. "We're hoping to get it down to 400 to



Alaska
Coastal
Currents

Restoration and recovery following the Exxon Valdez oil spill

600 trees per acre, maybe less."

This summer foresters will treat about five to eight acres, thinning the trees to about one for every 12-16 square feet. They'll also prune the trees to help maintain understory plants such as devil's club, huckleberries, alder and willow. Kesti says they'll stick to the same treatment design used in Southeast in order to be able to compare data. They hope to end up with areas which have a mix of different species, sizes and densities of trees and shrubs.

"If you can keep the sunshine in, and keep some openings, you can keep the shrub layer and the herbaceous layer," said Kesti. "Structural diversity helps other species besides just the species injured by the spill."

Properly managed, second-growth forest can be put on a fast track to maturity. In forestry terms, however, "fast" is a matter of perspective. Kesti estimates that rather than taking 240 years to produce a mature forest, the treatments might reduce the forest's growing time by half. That might provide more wildlife habitat or more harvestable timber. In the short term, though, it could also provide some employment which would be a boost to the local economy.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

eth come in.

The goal of the rehabilitation effort for this seal pup is to get it fattened up for reintroduction to the highly competitive and dangerous world of the sea.

According to a press release from the SeaLife Center, the tourists who picked up the seal pup most likely orphaned it in the process.

Barbara Mahoney, a biologist with NMFS in Anchorage, said no enforcement action was taken against the tourists in Juneau, as they thought they were helping the animal.

Mahoney said it's important to monitor any marine mammal that appears to be stranded for at least 24 hours before attempting to rescue it, especially in the case of young animals. The mothers of seals, for example, do not abandon their young unless they are being hunted, are injured or have been captured.

Mahoney said it's unclear why the number of stranded animals being reported or turned in to NMFS has risen in recent years. It could be that more animals are found stranded, but most likely the increases are the result of heightened public awareness.

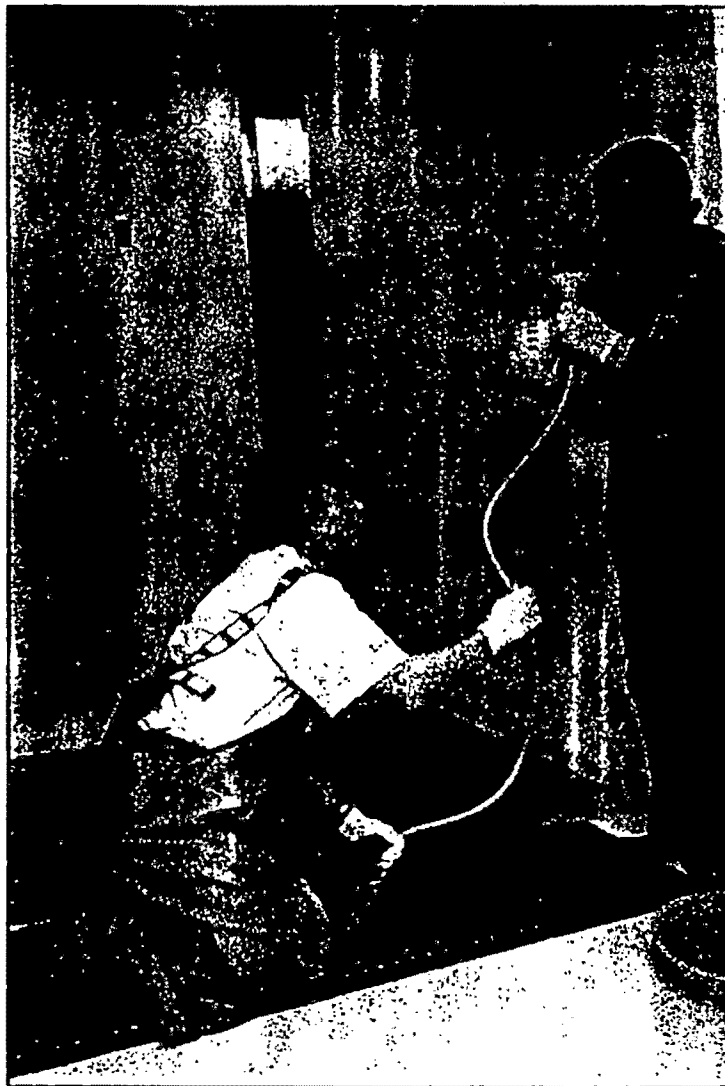
And with more people exploring the Alaska coast, contact with marine mammals has increased as well.

"Alaska's always been kind of remote, but more areas are being covered now," Mahoney said, and NMFS is receiving better public input in Alaska.

Rescue unneeded

Seal pups found on ocean beaches in the spring may appear to be abandoned, but in most cases the mother is at sea feeding and will return to her pup.

NMFS encourages individuals



Roger Kane/LOG photo

Veterinarian Pam Tuomi kneels over the 3-week-old harbor seal being rehabilitated at the SeaLife Center Friday as Lynn Aderholt pours the high-fat content pinniped formula into the hose from which the seal feeds.

finding seal pups not to touch or approach them.

James Day, an NMFS enforcement officer in Seward, said if an animal appears healthy and is behaving normally, it is probably not stranded.

"If an animal is not injured or

clearly in trouble, it should be left alone," Day said.

Anyone who removes a seal pup from a beach may eliminate the possibility of the pup ever reuniting with its mother. Caring for an animal if it imprints on a human being or cannot otherwise

be reintroduced to the wild is also costly.

NMFS wildlife biologist Kaja Brix said the costs they're most concerned with are that of an animal's welfare and to the species population.

She said people need to recognize that when they remove a lone pup from a beach, they are removing the animal from a "perfectly natural situation."

She said it's not uncommon for a mother seal to leave a pup for up to 10 hours while it is feeding at sea. If the pup is not there when the mother returns, the two will most likely never be reunited.

Brix said last year at least seven healthy pups were picked up from beaches and taken to NMFS by people who had assumed they were abandoned. She said true strandings occur much less frequently.

Harassment

Harassing any marine mammals, including seals, carries a fine of \$10,000.

Mahoney said the code of conduct for wildlife viewing requires staying a minimum distance of 100 yards from a marine mammal. She said it's important to spend no more than 30 minutes viewing them and not to trap mammals between boats or encircle them.

All vessels should yield to animals traveling toward them, so as not to change their behavior, frighten or threaten them.

"And realize you're not the only boat in the animal's day," she said.

The cumulative effect of vessels and multiple-vessel contact, even though they may be operating within NMFS guidelines, can disrupt the animals.

Harbor seal dies in rehabilitation

SeaLife Center officials seeking cause of death

By Roger Kane
LOG Staff

One of two harbor seal pups in rehabilitation at the Alaska SeaLife Center died unexpectedly June 3. The cause of death is still unknown.

The 2- to 3-week old pup arrived May 27 from Cordova with a 6-centimeter long and 5-centimeter deep wound over its right hip, likely caused by a boat propeller.

SeaLife Center veterinarian Pam Tuomi said the animal was initially responding well to treatment and its wound was healing nicely. The first sign anything was wrong came the morning of June 2, when the seal pup developed a dangerously high temperature of 103.6 degrees (normal is between 98 and 99 degrees).

At about the same time, the pup became "oblivious to being handled" and at about 3:30 a.m., after almost 24 hours of "not normally responsive" behavior, the critically ill seal died, Tuomi said.

"Everybody here was devastated," she said. While everyone had taken great care not to imprint human behavior upon the seal, the seal made a lasting impression on everyone working with it and after only a week, most became emotionally attached to the pup, she said.

The sudden illness and subsequent death took everyone by surprise, as they were concentrating on treating the animal's wound and had no idea it was sick.

Tuomi conducted a necropsy, a thorough examination of all body tissues. She weighed and measured the organs, and took samples of tissues, blood serum and

cultures. The samples will be kept in the University of Alaska Fairbanks' archives, as well as in the SeaLife Center's archives.

During the necropsy, Tuomi discovered many pinpoint-sized hemorrhages scattered throughout the pup's brain.

The hemorrhages were present in the white matter of the medulla oblongata — the rear portion of the brain that regulates breathing, blood circulation and other muscle controls.

Tuomi said the lesions indicate that an infection is the likely cause of the young seal's death.

"Any physical trauma when it was hit (by the boat propeller) would've shown up within 24 hours. This is something that was incubating," she said.

But analysis of the animal's blood chemistry at admittance to the SeaLife Center and after its death revealed little about the pup's demise. No lung parasites or intestinal infections were found during the post-mortem examination either, Tuomi said.

"Those tissues were perfectly normal," she said.

If the seal suffered from a neurological infection, it's not likely that evidence of it would show up in the blood, she said, and there's no way of knowing what killed the seal, unless the organism responsible for the infection is identified.

"If it is an organism," Tuomi said.

A toxin may have caused the pup's death, but Tuomi is skeptical because there would have been visible tissue damage in more places than just the brain the pup had been exposed to lethal toxin.

Tuomi said a pathologist will be examining the samples she took from the pup and a pathology report should be available within a week.

Ongoing rehab

The other harbor seal pup being cared for at the SeaLife Center was about 3 days old when it arrived May 24 from Juneau. The pup was picked up and taken to the NMFS office in Juneau by a tourist who thought it had been abandoned.

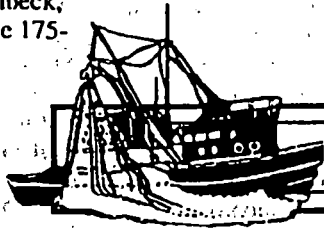
The baby seal is not injured and is in good health. It's gaining weight steadily and behaving normally.

Now almost 3 weeks old, the animal is being tube-fed a high-fat pinniped pup formula similar to a baby formula. It will be weaned from the formula and introduced to live fish as soon

over

Fire last fall pushes Port Graham processor into water

THERE'S A SALMON PROCESSOR at work again in Port Graham, but it's tied to the dock. Port Graham Seafoods Inc. suffered a devastating fire last fall, and while the company has hopes of rebuilding for the 1999 season, said co-owner Doug Holbeck, this year it contracted the 175-foot freezer/longliner Hasse Fjord to head, gut and freeze salmon caught along the south shore of Kachemak Bay.



SEAWATCH

Joel Gay

Setnetters from Halibut Cove to Nanwalek began work June 1 and had landed about 900 reds and 500 kings through Monday, according to Lee Hammarstrom of the Department of Fish and Game. Fishermen told Holbeck that last week was one of the slowest they can remember, but most expect fishing to improve as spring runoff subsides. Port Graham Seafoods is advancing fishermen 65 cents a pound for reds, Holbeck said, but that will rise when the majors settle on a price.

The company had hoped to take advantage of the stronger market for canned reds, he said, but after the cannery burned down it will have to be content with freezing and the lower value of those fish. The kings are going into specialty markets or fishermen's freezers, Holbeck said.

been participating and several of them have apparently called it quits, Hammarstrom said. Even though this is traditionally the peak of that early run, the cost CAAA recovery effort at the Bear Creek weir had only taken 228 reds, he said. CAAA had hoped to see 19,000 fish return this year — 11,000 for harvest and cost recovery and another 8,000 for escapement.

Old bones hold clues to decline in several Gulf of Alaska species

By Jody Seitz
For The Times

Coastal currents

Theories about changes in the Gulf of Alaska ecosystem have been circulating for several years. Declines in species such as common es, marbled murrelets, sea lions, and harbor seals coincide with documented changes in the abundance of several species of fish in the Gulf of Alaska since the late 1970s.

Marine mammal researchers wanted to find out if changes in harbor seal and sea lion populations had anything to do with changes in their supply of food. They were interested in learning if the animals were eating different prey, or if the prey were just less abundant.

In order to see the changes they first had to find some marine mammal data from the 1970s which could be compared to data they have now. In spite of the limited number of animals which were taken for research in earlier years, they found what they needed in the University of Alaska Fairbanks Museum.

Dr. Don Schell and Amy Hirons of the UAF Institute of Marine Science looked for natural tracers of the food web, stable isotopes of carbon and nitrogen atoms, found in the tissue of all living organisms,

For chemistry buffs, isotopes are just different forms of a chemical element. Those with more neutrons in their nuclei are known as "heavier" than ones with fewer neutrons. Carbon 13 and carbon 12 are examples of carbon isotopes which don't change as they age. Another isotope of carbon, carbon-14, is used to date artifacts, because it changes predictably over time.

The exact combination of these isotopes is set by the environment the animals live and feed in. The nitrogen isotopes can tell about where on the food web the animals eat, while the carbon isotope ratios reflect the productivity of the environment.

Hirons compared the carbon and nitrogen isotope ratios in the bone collagen of the marine mammal skulls from the museum to muscle tissue of harbor seals collected during the 1990s.

Hirons and Schell found that since the mid-1970s, the nitrogen stable isotope ratios hadn't changed, but the ratio of carbon isotopes had.

Their findings suggest that something in the mid-1970s affected the plant production in the Gulf of Alaska. With fewer plant plank-

ton there was less food for animal plankton, less food for fishes, and

so on, all through the food web.

In other words, their research suggests, the Gulf of Alaska may not be able to support as much life as it used to.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council.

EYES UNDER THE SEA

ADN

6-11-98



TINY SUBMARINE OFFERS DEEP EXPLORATION OF LITTLE-SEEN AQUATIC WORLD

TUTKA BAY — Above water, the Delta looks like a toy. At under 16 feet in length, just big enough to carry a pilot and a passenger, the mini-submarine has enough personality to draw chuckles and coos.

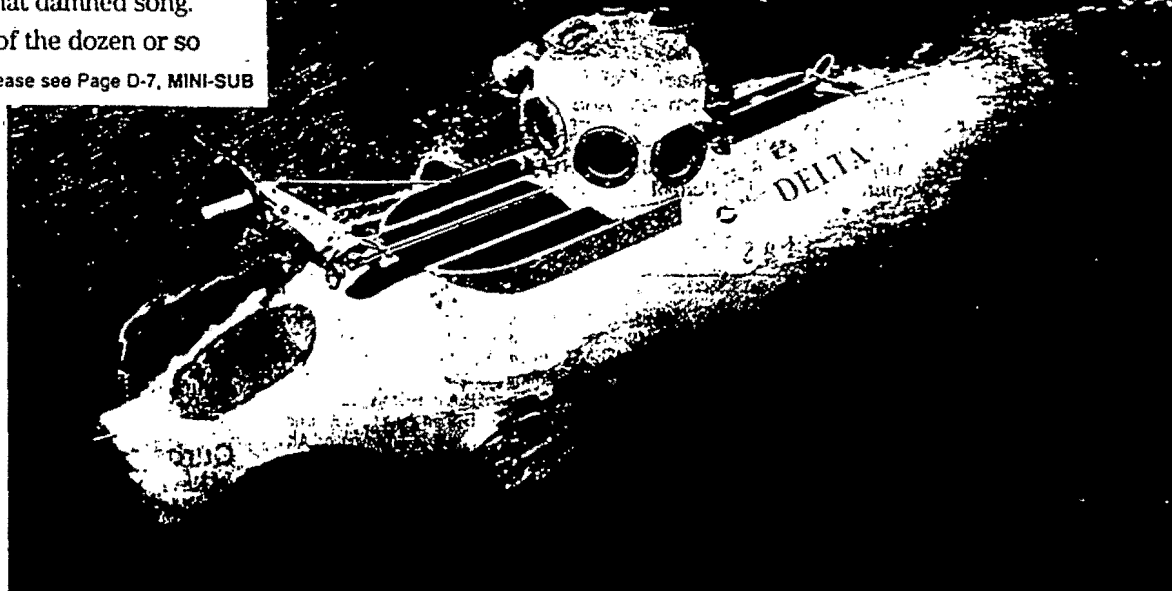
Not to mention it's just the right shade of yellow to provoke choruses of a certain Beatles tune — or, as its pilots call it, "that damned song."

Some of the dozen or so

Please see Page D-7, MINI-SUB



Richard Slater, one of the designers and owners of the Delta, has been interested in submersibles since the 1950's. Pilot Dave Slater is his son.



Two Kachemak Bay-area high school students were among about a dozen Alaskans who got to the bottom of things in Tutka Bay last week, courtesy of Homer's Pratt-Museum and a two-man research submersible — the Delta

Alaskans offered the unusual opportunity to take a ride in the sub last week had their doubts. Could this hobbling tub toy really transport them safely 500 feet beneath the waves? And even so, was there anything worth seeing?

Pratt Museum exhibit director Carol Harding, there as a representative of the Homer museum's marine-education program, erased all doubts when she emerged from her half-hour trip, smile first.

"Brachiopods, sea stars, sea anemones, fish!" she gushed. "Halibut — lots of halibut! And lots of shrimp with little beady eyes that glow in the dark!" Others crowded round the dive schedule to see how long it would be before their turn.

As comical as it looks bubbling up to the surface or chugging along as it prepares to descend, the Delta is a serious tool, a research submersible that can descend to 1,200 feet, well beyond the capabilities of most scuba divers. Most subs like the Delta originally were created to work on offshore oil projects but have been reconfigured for other kinds of research. Outfitted with bright lights, cameras and other research equipment, the \$400,000 sub has chipped rock samples from the ocean floor, collected piles of crabs for study at the surface and chauffeured explorers through the wreck of the *Lusitania*. It also, occasionally, gives joy rides.

Usually reserved only for the use of scientists, the sub visited Homer last Tuesday to offer rides to guests of the Pratt, celebrating both its 30th year and its program "Kachemak Bay Discovery." Nanwalek high school student Sonya Ash, 16, won her chance to ride with an essay saying "women can do anything." Homer High School student Jasmine Fry, also 16, came with her biology teacher, Stan Eller, who hoped to reward her interest in marine biology.

Richard Slater, one of the builders of the Delta who's piloted more than 3,000 dives and has been interested in subs since he saw Jacques Cousteau's first "Saucer" in the 1950s, was on board just to see it again. It's rare, he said, that he can get a chance for a visit. The sub is simple, he admits — "the Jeep of submersibles," he calls it — but it does what it has to do.

It's not rigged with the most sophisticated scientific equipment, but a measuring device using two red laser points and a simple collection arm have served imaginative researchers well.

The guests' day was spent exploring an underwater wall that goes down 500 feet alongside San Juan Island in Tutka Bay, just off Kachemak Bay. Eventually, the museum plans to raise money for a remotely operated sub of its own, Harding said. She envisions offering live video footage from the bottom of the bay on the museum's web site.

But first, organizers wanted to know that the view is worth seeing.

Ride in this tiny sub is nowhere austrophobic or frightening as one might imagine. Though space is limited, the passenger, who must lie on his or her stomach beneath the pilot's seat, has a relatively comfortable trip. Arms and legs get cramped after hours on board, report researchers, but a 30-minute trip is no more uncomfortable than a rest on a well-padded cot.

The Delta takes only moments to

drop several hundred feet. There's no sinking feeling to accompany the rapid descent, no ear-popping to indicate a pressure change. The vessel's interior stays at sea-level pressure, thanks to tanks releasing oxygen at a preset rate; carbon dioxide exhaled by passengers is absorbed by a filter. The hull has been tested in depths up to 1,700 feet, but builders estimate the hull would not "crush" until 3,000 feet.

For the typical rider, the descent is less disruptive than an elevator ride.

Only a blizzard of white particles (small animals and plant matter, known as "sea snow") and a few jellyfish rushing by give a sense of motion. Only the pilot's periodic announcements give a clue of the depth. Soon enough, with a light thud that startles shrimp and sends up a cloud of silt, the submersible hits bottom.

When the water clears, the Delta's spotlights reveal a world most people never see: forests of treelike anemones 4 and 5 feet long; tiny shrimp and jellyfish, translucent but for their glow; delicate frills of pink anemones, bright-red sun stars; and a languidly lounging orange sea cucumber decorating the bay floor.

The only disappointment on this trip is when it's over.

At a cost of about \$800 a dive, such excursions may seem extravagant for nonresearchers. Why bother giving others such a coveted view?

"Part of our responsibility is to make information known to potential researchers and educators about our equipment," said Ray Highsmith, a University of Alaska Fairbanks professor and director of the West Coast and Polar Regions Undersea Research Center. The agency, one of six such centers nationwide under the National Oceanic and Atmospheric Administration, funds and supports undersea research along the West Coast and the Arctic and Antarctic. Its grant money brought the sub to Alaska.

Small submarines like the Delta, properly known as submersibles, are crucial to undersea research, since scuba diving is only possible to certain depths. But they are scarce and can be expensive to obtain. Though little-known by those outside the research community, the undersea center is the primary filter for research proposals in the region. One of its advantages, Highsmith said, is the ability to pool resources to make research more affordable.

The sub's visit this summer was no exception. Just two days before it arrived in Homer, it was in Cordova, where ecologists at the Prince William Sound Science Center spent more than a week in it studying octopus.

David Se... a principal investigator with... since William Sound octopus study, said the sub allowed his team to study *Octopus dofleini*, commonly known as the giant octopus, at greater depths than anyone has done before. Their work is still ongoing, Scheel said, but already

researchers have learned that shallow-water octopus seem more abundant than those in deeper waters.

The sub is now in Kodiak for a Marine Fisheries study, and will end its 40-day tour of the state June 27, when the Alaska Department of Fish and Game boat carrying it is due back in Juneau.

Cindy Lee VanDover, a UAF professor and science director of the regional undersea center, is passionate about the use of manned submersibles in research. In the early 1980s, she became the first woman, and one of the only scientists, to become a trained pilot of submersibles.

After more than a thousand dives, VanDover probably would be inclined to conduct most of her deep-sea research using remotely operated vehicles these days. But she believes her first-hand undersea experience was crucial to her development as a "creative person" and scientist.

"There's no substitute for having human eyes down there," she said.

The next step, she says: To get Alvin, "the premier deep-diving submersible in the world," up here by 2000. It will be available that year to independent researchers for the first time in recent history. The UAF-affiliated undersea center is encouraging scientists here to apply.

Although VanDover trained in the Alvin, one of only two deep-sea submersibles in the United States and the same vehicle made famous by its explorations of the Titanic, her mission is not one of sentimentality. The Delta is considered a "shallow-water" vehicle compared with submersibles like Alvin, which can dive more than 14,000 feet and has room for three on board. Though remotely operated vehicles have been used by researchers here, a manned deep-sea submersible has never come to the region. For now, VanDover said, deep-sea research here is mostly "on hold."

Its availability would make possible all kinds of research to answer lingering mysteries over deep-sea life. How do animals adapt to the superheated water of the sea-floor hydrothermals that VanDover studies? What creates seamounts, the underwater mountains she and others are eager to explore? Is some kind of underwater light feeding photosynthesis at depths the sun can't reach?

"The science is waiting," she said.

The mini-submarine motors back to the Alaska Department of Fish & Game boat used as a staging area between trips to the bottom of Tutka Bay.

Alaska Coastal Currents

By Jody Seitz



Bringing back forests

Many of the species injured by the Exxon Valdez oil spill depend upon mature forests for habitat. Since 1985, approximately 19,768 acres of old-growth forest have been clear cut in Prince William Sound. As these timber harvests are completed, the U.S. Forest Service is looking for ways to help the land owners manage the newly-cut areas for wildlife.

With no tried-and-true formula for helping the forest regenerate quickly in the northerly and rainy Prince William Sound, silviculturists are looking to the experience of southeast Alaska foresters to model experiments promoting second growth.

Using funds from Exxon's criminal settlement with the government, Sue Kesti, of the U.S.F.S. Cordova Ranger District, developed a treatment plan for an old clearcut on Montague Island. The purpose of the project was to develop some guidelines for managing second-growth forests to help injured species recover.

The plan identified the habitat needs for bald eagles, river otters, marbled murrelets, and harlequin ducks. Fish species such as Dolly Varden, cutthroat trout, sockeye and pink salmon also may benefit.

"The project should result in a plan that can be used by private land owners to develop second-growth forests. "In 10 and 20 years, they can look and say, here's some things to try," said Kesti.

The area to be treated is second-growth forest around Swamp Creek, about two miles south of

Port Chalmers. About 360 acres were harvested there from 1970 - 1974. The forest is growing back, but the trees are too crowded, with some pockets with over 2000 stems per acre. "You can't even walk through it, that's how thick it is," said Kesti. "We're hoping to get it down to 400 to 600 trees per acre, maybe less."

This summer foresters will treat about five to eight acres, thinning the trees to about one for every 12-16 square feet. They'll also prune the trees to help maintain understory plants such as devil's club, blueberries, alder, and willow. Kesti says they'll stick to the same treatment design used in southeast in order to be able to compare the data. They hope to end up with areas which have a mix of different species, sizes, and densities of trees, and shrubs.

"If you can keep the sunshine in, and keep some openings, you can keep the shrub layer and the herbaceous layer," said Kesti. "Structural diversity helps other species besides just the species injured by the spill."

Properly managed, a second-growth forest can be put on a fast track to maturity. In forestry terms, however, "fast" is a matter of perspective. Kesti estimates that rather than taking 240 years to produce a mature forest, the treatments might reduce the forest's growing time by half. That might provide more wildlife habitat, or more harvestable timber. In the short term, though, it could also provide some employment, which would be a boost to the local economy.

Coastal currents

Oceanographers use simple video camera to track seabird prey

By Jody Seitz

It's estimated that 250,000 seabirds were killed by the 1989 Exxon Valdez oil spill. Today, many injured species, including marbled murrelets, pigeon guillemots and cormorants, have still not recovered from the spill. Other species of seabirds, such as glaucous-winged gulls, arctic terns, and tufted and horned puffins also have been in decline, some since the 1970s.

One reason often suggested for these declines is that their prey base has changed. To test the idea, scientists are studying the fish populations of Prince William Sound using a simple, underwater video camera. Oceanographer Lew Haldorson came up with the idea in 1996 and it worked so well they've been using it ever since.

"We use a relatively inexpensive video camera that we lower and tow directly beneath the boat," said Haldorson. It provides visual confirmation of the fish and schools identified through sophisticated sonar. "And if you have a good skipper, he can usually guide the boat over the fish, and if you have any luck at all you have a good chance of getting a good video recording of the species that are there."

They ran transects back and forth across bays and passages.

The 1996 transects revealed that most of the fish were near the shore, so the next year they changed their sampling pattern to focus more on those areas.

Herring were the most abundant fish they found, and of these, most were young of the year, or 1- and 2-year-olds.

Occasionally they'd run into schools of adults. Haldorson's camera has recorded massive schools of jellyfish, salmon and salmon sharks.

More commonly, he sees capelin, sand lance, pollock, and smelt. Instead of seining up the fish to sample and identify them, they use the camera. It's much more efficient.

"This can be a lot faster and easier to do than making a purse seine set," said Haldorson. "It also works on schools of fish that are too deep for some of our gear."

The video technique helps the scientists judge how well their sonar equipment allows them to estimate the density of schools. "We can come up with an estimate of how dense the schools are," he said. "We can compare that to the estimate of the acoustic equipment."

When we look at the video we can tell how close together they are."

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Fisheries Research Center on schedule to open this fall

By MIKE ROSTAD
Special to the Mirror

A long time dream is finally becoming a visible reality in a Sitka spruce forest on Near Island.

The Fisheries Research Center is scheduled for occupancy by mid September. At about that time a dormitory for visiting scientists and students should also be completed.

The research center will serve a multitude of user groups and will be occupied by a number of agencies, including several divisions of National Marine Fisheries Service, the Alaska Department of Fish and Game, National Parks, and the University of Alaska School of Fisheries and Ocean Sciences.

The \$15.4 million center is owned by the Kodiak Island Borough which will have staff in the

building. It covers 46,000 square feet and has three levels with state-of-the art equipment. The first level includes a laboratory with seawater tanks.

"Our goal has been to develop this laboratory in a flexible way to make it feasible to do about any kind of research," says Scott Smiley, director of the neighboring Fisheries Industrial Technology Center which will use the facility.

"The new building has the potential to give us very valuable information on the nature of the marine eco systems in Alaska waters," Smiley says. "One of our principal areas of interest is the regime shifts...(such as) the sudden and rather dramatic shift from crustacean and to finfish in the North Gulf of Alaska that occurred in the early 1980's," Smiley says.

"Prior to 1980, fishermen here were harvesting approximately 100,000 metric tons annually of king crab and shrimp. After 1980 they were harvesting approximately 100,000 mt of pollock annually. In the 1990's, harvests changed and the bulk of fish captured (shifted) from pollock to other groundfish species including cod and flatfish.

"What we need to know is the relationship between environmental change and the shift in the species that are out there. The Kodiak Fisheries Research Center will give us a place where we can do some of the studies that are important, studies such as measuring the rate of development of the variety of different species in the food chains," Smiley says.

"The individual food chains are linked together into food webs. What we need to know is how an increase in temperature changes the time it takes for an individual organism to develop."

Smiley says studies at the research center will also focus on some of the major commercial species.

The organisms will be in seawater tanks located on the first

level of the building. The water for the tanks is taken from Trident Basin and run into a reservoir tower adjacent to the laboratory. From there it is pumped into the laboratory at a rate of 2,000 gallons per minute. Some of the seawater is diverted into a filter which will eliminate little bits of debris. This will be pumped into tanks inhabited by larger organisms, such as fish. The unfiltered water will go into tanks with the smaller organisms.

"When you're developing embryos you want raw seawater," Smiley explains.

Tanks are made of plexiglass, fiberglass and other materials, depending on their purpose.

There will also be an interpretive center on the lower level that will house a 10-foot tank, which resembles an aquarium, and a touch tank that will be stocked with marine critters "so that K-12 students will be able to see them and learn from them," Smiley says.

One of the tanks will accommodate unusual, unidentifiable creatures that puzzled fishermen bring in.

If fishermen find something they can't identify, Smiley says,

"maybe we ought to look at it, because they have a lot of experience, and if they don't recognize it, it could be important."

NMFS agencies will occupy roughly 29,000 square feet of office and lab space, which makes up roughly 80 percent of the net square footage in the center.

"We do a lot of biological research...and statistical work" in addition to many other projects, says Bob Otto, director of the NMFS Resource Assessment and Conservation Engineering division.

"We're responsible for analysis of crab populations and abundance in the Bering Sea. We look forward to bringing animals back from the Bering Sea which will be observed in sea water tanks."

"Once we move into the center we want to do pathological work such as identifying a number of (shellfish) diseases. We have a little understanding of the progress of the disease in crab and shrimp."

Otto says NMFS will have the capability of analyzing shellfish diseases and contaminants and sterilizing water that may contain. See RESEARCH CENTER, Page 15

Research center

Continued from Page 14

tain diseased critters.

Drainage from possibly contaminated seawater will be pumped into a containment vessel and treated in a way that will kill all viruses and bacteria, avoiding the possibility of dumping any contaminated water back into the sea.

Lab spaces on the lower level will also be used for various teaching programs, including the training of K-12 teachers "so they can be life long learners in their profession," Smiley says.

Through money contributed by Phoenix Processors, the FITC is producing a unit for teachers of 4th, 7th, 10th grades, with an objective of "trying to change the perception that working on seafood processing is working on the 'slime line,'" Smiley says.

"We want to get people to understand that our job in processing plants is to make human food. People have to have a new attitude about it if we're going to sell our products competitively across world markets. Our fish is fine," Smiley quips.

"We anticipate having K-12 students in the lab on a fairly routine basis and we also anticipate that there would be college courses through the Kodiak College," Smiley says.

"If there's a need for it, we could have upper division and graduate courses."

The upper level of the center will house a dry lab, offices, a research library and conference rooms.

Like the nearby FITC, the new research center provides awesome views of Trident Basin, thanks to glass enclosed areas.

When they are lit at night, they

look like lanterns from a distance.

The main entrance to the building leads to an interpretive center where displays of local wildlife species will give visitors a feel for the island.

A whale skeleton is suspended from the ceiling and a mounted bald eagle is encased in a glass cage. A huge contour model map of the Kodiak Island Borough will also be featured.

Mechanical spaces are located on the third level.

The Fisheries Research Center has been in the planning stage for more than 15 years. It is one piece of a three facility program that also includes a sealife center in Seward, which specializes in marine mammals and birds; and a facility in Juneau which is a collaboration between the National Ocean and Atmospheric Administration and the University of Alaska.

"We're hopeful that the work done in these three centers will be directly exportable to the Bering Sea as well," Smiley says, noting that "logistics out in the Bering Sea are hard to deal with."

Smiley says that the "sense of cooperation is very important" in the use of the new center.

"If someone wants to come to work here, we'll find a way to make it work," Smiley says.

"The leadership of the Kodiak Island Borough has been very important in fostering a sense of cooperation here. The whole plan of the building is one of cooperativity and congeniality."

"We're trying to make this building work for us and for the people who need to do the research in order to keep the North Gulf of Alaska a viable fisheries

operation for all the years to come."

The project manager for the research center is Grant Leader, employed by ECI Hyer, an architectural firm which was contracted by the Kodiak Island Borough.

ECI Hyer also did the design work for the addition to Peterson Elementary. Leader was one of the project managers for the new \$110 million Alaska Native Medical Center in Anchorage.

The research center "is going to be a hard job to beat as far as working on a unique project and a beautiful site," Leader says. "It's hard to imagine a job getting any better from here."

"I enjoy the daily issues that need to be taken care of and the fast pace."

Kodiak organizes to stop marine pollution at its source

By Jody Seitz
For The Vanguard

Coastal Currents

After the tanker Exxon Valdez dumped 11 million gallons of oil into Prince William Sound in 1989, public attention focused not only on the cleanup effort, but also on other sources of pollution in the spill area.

In Prince William Sound the process of cleaning up the existing sources of pollution got underway in 1996. Communities around the Sound joined forces to deal with common problems such as overflowing landfills, inadequate sewage systems, scrap metal, and household hazardous waste disposal under a regional plan. The plan they created, the Sound Waste Management Plan, has inspired Kodiak communities to do the same thing.

Practically all manufactured goods make it to Kodiak Island on a plane or a barge. When the life of freezers, washers, batteries, and paints is over, they're usually tossed in the landfill or down the drain. That translates to overflowing landfills and sewage systems, and ocean and stream pollution from runoff.

Recently Jeff Petersen of Old Harbor witnessed the waste disposal problem firsthand. The Kodiak Island Housing Authority was putting in new boilers and furnaces for about 100 houses. After the barge delivered its cargo it left, instead of taking away the old appliances. All the old appliances were taken to the dump.

Petersen was annoyed. "Why

are all the water tanks and furnaces up at the dump? Why can't we just put them on the barge that brought the new ones?" he asked. "There's 100 houses up there! That's 200 big bulky things up at the dump."

The seven Kodiak Island communities of Larsen Bay, Old Harbor, Akhiok, Port Lions, Ouzinkie, Karluk and Chiniak are each part of the Kodiak Waste Management Plan.

The borough would like to see these communities team up to deal with their waste disposal problems, said Ron Riemer, Environmental Engineer for the Kodiak Island Borough. "Villages that are relatively connected to each other by air can exchange

operation and maintenance personnel, conduct training together and solve some problems together," he said.

Besides being more efficient, it's cheaper. "Anything that is purchased can be purchased in quantity; (and) if these communities start getting equipment that is similar in all the facilities, operation and maintenance can be cheaper," said Riemer.

According to Petersen, coordinating services and supplies with the other remote villages around the island makes sense because they face similar problems with transportation, shipping, on-site disposal, and training, as well as purchase and maintenance of equipment and supplies.

One of the most common problems, waste oil, may soon have a solution. The "Smart Ashe" incin-

erator takes wastewater, bilgewater and burns off the oil and water.

"The used oil is placed in the drum and ignited and in about an hour 20 gallons of used oil has been eliminated," said Riemer.

Education and public awareness are important components of the planning effort.

"The public needs to learn how to manage the various problems — what should go into a landfill and what should not; what should go into the sewage system and what shouldn't," said Riemer.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Alaska Coastal Currents

By Jody Seitz



Scientists find herring choosy when eating

Anyone who remembers the old herring fisheries in Prince William Sound can tell you it takes a long time for herring populations to increase once they're down. Exactly how they recover, no one really knows.

A year after the 1993 herring crash, scientists at the University of Alaska Fairbanks began to take a close look at Prince William Sound to see where and how herring survive the best. First they discovered that herring spend the first two years of their lives in bays. Then researchers focused on four bays where they often found juvenile herring. There they studied their food supply and the ocean currents, temperature, and salinity of the bays. They sampled the plankton and tallied the types and amounts in each bay. Then they studied the condition of the herring and their stomach contents.

According to Robert Foy, UAF fisheries oceanographer, herring feed almost exclusively on zooplankton. And they are choosy. The data showed the plankton the herring ate were not always the ones that were most abundant.

"That suggests it's energetically more favorable for them to be eating this prey rather than just opening their mouth and swimming through the water and picking up anything that's there," said Foy.

High-fat zooplankton such as calanoid copepods are one of the foods they prefer, but they aren't always available. Sometimes the herring have to put up with what's there.

The amount of zooplankton

available depends on the season, ocean currents, and the amount of plant plankton produced each year.

Researchers conducted broad surveys of the sound, but focused on Simpson, Zaikoff, Eaglek, and Whale Bays. "We wanted to be able to compare the different sides of the sound, and areas that might be a little more sheltered than others. Within each of the bays we had an inner, a middle and an outer site to compare distributions of [zooplankton] within the bays," said Foy.

They found that within each bay different species of zooplankton have their own particular niches, showing up in abundance in certain seasons and places. The data showed that nearly one third to one half of the zooplankton in the bays is the same as that outside of the bays. That means half the zooplankton in a bay are unique to that bay, and may live there all year.

In summer of 1996, shallow, secluded Simpson Bay produced three to four times more food than Eaglek, Whale or Zaikoff Bays. It also had the most juvenile herring.

"Ultimately what this suggests is that Simpson Bay may be a better rearing area for juvenile herring because it actually has a larger abundance of zooplankton than the other three bays," said Foy. Other bays with stronger circulation might not provide as good habitat, suggests Foy.

Researchers are still analyzing their data from 1995, 1996, and 1997, to see how the food supply changes from year to year.

Bills could threaten public access to road

CORDOVA TIMES
6/18/98

By Jennifer L. Strange

The Cordova Times

Chugach Alaska Corporation's Carbon Mountain logging project may have been sold to Cordova residents under false pretenses, said a U.S. Forest Service representative last week. The project, which requires about 40 miles of roads and bridges to be built over and around the roadless Copper River Delta, was pre-

sented to Cordovans as a beneficial undertaking that will bring jobs and increased land access to area residents.

But new legislation may prevent the roads from being open to public access, said Cordova District Ranger Cal Baker. On May 18, Sen. Frank Murkowski introduced S.R. 2088 and Rep. Don Young introduced H.R. 3087 to the U.S. Congress, identical bills requiring the U.S. Forest

Service to grant CAC "an irrevocable and perpetual 500-foot-wide easement for the construction, use, and maintenance of non-public roads and related facilities necessary for access to and economic development of the land interests in the Carbon Mountain and Katalla vicinity" that were conveyed to CAC by ANCSA.

Baker said the U.S. Forest Service generally supports the road route proposed by CAC as having the least impact on habitat and wildlife. He also said the Forest Service is obligated to provide access across National Forest to the native corporation land as per

the 1982 Chugach Natives, Inc., Settlement Agreement. Because the Forest Service is already obligated to this, Baker said the legislation is "not needed, contrary to the CNI agreement and not productive."

As further proof of the legislation's contradictory nature, Baker said the Forest Service has the right to require environmental analysis and safeguards as part of the project. If the new legislation is passed, CAC will get the right to begin construction on roads over National Forest and CAC land no later than Dec. 11, regardless of the adequacy of the analysis or any

issues that remain to be resolved. In addition, the bills include provisions for potential additional roads in the Katalla vicinity, for which no analysis has been proposed.

But it's the public access angled that really irks Baker, he said.

"During open houses in Cordova, one of the themes repeatedly heard from the public was that the public access provision of the CNI agreement was desired," Baker said. The Forest Service has taken a consistently strong stand for public access, as prescribed in the CNI agreement, Baker said.

"Chugach Alaska Corporation

does not desire public access on the road," Baker said. "As a result of their desire, both (these bills) identify the road as being 'non-public' and have other provisions to eliminate or modify provisions of the CNI Agreement."

Mark Stahl, CAC's land manager, said the project "allows for the management of public access" and that CAC isn't opposed to public access.

"We're putting in tools to allow for different user groups, but we can't have inappropriate vehicles in there," Stahl said. "(We're looking at allowing) hunters, fishers, hikers."

Proposed Mineral Creek Marine Park plans take step forward

By Ruth Case

Valdez Vanguard

The appraisal of the Blondeau property for the proposed Mineral Creek Marine Park has been completed and currently awaits review by state and federal authorities.

The Exxon Valdez Oil Spill Trustee Council, the potential

buyer, voted in December 1997 to give the State Division of Natural Resources the authority to do the appraisal, said Carol Fries, a natural resource manager with the DNR. Wayne Blondeau currently owns the 100 acres.

The Council also declared the land an area meriting special attention, Fries said, which moved

the property ahead of other land being considered for purchase.

The state has already committed to building and maintaining a marine park and picnic area near the ocean shore along the mouth of Mineral Creek.

The appraisal, aimed at determining the fair-market value of the property, began in March and

was completed June 5, Fries said adding that fair market value will be determined upon review.

"The appraisal is currently on the schedule to be reviewed by state and federal officials," Fries said. "Because EVOS has members on both the state and federal

level, the Council agreed to have both authorities review (the appraisal)."

Officials would begin the review process as soon as their schedules allowed it, said Fries.

"If the appraisal is approved, it will go back to the EVOS Council to determine if they want to proceed with the purchase," she said.

The City of Valdez offered 50 acres of city-owned land up for sale in December for \$10, as an incentive for the Council to purchase Blondeau's property. The city land was not appraised because the asking price is only \$10.

"The Trustees will take action on the city land in conjunction

with the Blondeau property," said Stan Senner, science coordinator for the EVOS Restoration Office. "Right now it is in limbo, waiting for the decision on Blondeau."

Dan Lawn and Mary Jo Evans also offered 16 acres up for sale in December. Blondeau, Lawn, and Evans are asking fair-market price.

"Lawn and Evans' property is currently in the EVOS habitat work group, with representatives from various agencies looking at it," said Fries. "They will evaluate the property for its potential benefits to resources injured in the Exxon Valdez oil spill."

Once the work group has finished looking at the property, it will pass to the EVOS Council for their consideration. If the Council decides to pursue the purchase, an appraisal will be done at that time, said Fries.

SeaLife Center 'hatching'

Colleen Kelly
LOG Staff

A three-year research project at the Alaska SeaLife Center should give the facility its own wild population of seabirds for both study and exhibit purposes.

In upcoming days, researcher George Divoky and others in his group will place about 50 pigeon guillemot eggs into the nesting

boxes they have installed on the SeaLife Center's beach waterfront.

Sadie Wright, technician for the group, has already collected 11 eggs from pigeon guillemot nests in Kachemak Bay. In two major collecting trips coming up, local climbers will assist the project by taking eggs from sites in Prince William Sound and Kodiak, Divoky said.

new research

By taking the eggs this early in the nesting season, he said there's a chance the hens will lay a second time. "We don't want to disrupt the breeding cycle of these broods."

Stealing the eggs won't be detrimental to the bird's numbers. "We'll provide a higher fledging success in captivity than they would have in the wild," Divoky said.

Before moving to Seward last month to take part in this research project, Divoky had participated in a North Slope project involving black guillemots. "We went from 10 nesting pairs to 225" in that project, he said.

Once the pigeon guillemot eggs hatch after a 28-day incubation period, researchers will feed the birds diets ranging from high-

mid- to low-lipids.

They will look at growth rates as well as contaminant levels, Divoky said.

"We'll almost certainly get three different growth rates," he said. "We'll probably test the liver enzymes that indicate whether the bird was exposed to oil."

At the time of fledging, researchers will take the banded birds to the roof of the SeaLife Center. "We'll do it at dark in order to avoid the prey. We'll have to make sure there aren't any gulls around," Divoky said.

They'll open the doors of the nesting boxes and let the birds fly away. When the philopatric (meaning "birds raised here") guillemots are 3 years old, Divoky hopes



Colleen Kelly/LOG photos

Andrew Hovey and Sadie Wright know the importance of sorting fish according to size before freezing them in plastic bags. Eventually, the fish will be thawed and fed to young pigeon guillemots.

Seward Phoenix Log 6/18/98



George Divoky hopes decoys like the one he's holding and the nesting boxes behind him will entice young pigeon guillemots to set up housekeeping near the Alaska SeaLife Center.

they'll return to roost in the SeaLife Center nesting boxes.

The research group will repeat the process over the next two summers.

By having their own resident population of pigeon guillemots, Divoky said they'll try find an efficient way to obtain blood and fecal samples without having to take them from eggs in the wild.

A secondary focus of the egg-hatching project is to attract other pigeon guillemots flying through the area to set up housekeeping in the nesting boxes. With that goal in mind, the researchers are placing plastic decoys in and around the nesting boxes. They're also playing

a CD recording of pigeon guillemot sounds in the wild.

Anyone taking a walk on the waterfront area between the Institute of Marine Sciences dock and the SeaLife Center will hear the sounds of pigeon guillemots even though the only ones in sight are of the plastic decoy variety, Divoky said.

Because pigeon guillemots breed at 3 years of age, Divoky hopes they're successful at attract-

ing some passersby. If they do, next year the nesting boxes might also be home to wild pigeon guillemots who've decided to relocate to downtown Seward.

The birds' offspring could then become study subjects for Divoky and entourage.

Dan Roby from Oregon State University is the principal for the three-year research project funded by the Exxon Valdez Oil Spill council. Divoky is a post-doctoral researcher. Others in the group are doctoral student Andrew Hovey and technician Wright, an undergraduate at the University of Alaska Fairbanks.

Task force outlines tourist potential of inlet's west side

By CHARLES ADAMSON
Peninsula Clarion

With extremely rare birds, volcanoes peaking out at more than 10,000 feet, world-class salmon fishing, untapped photographic opportunities and less than 20 miles away it's a wonder why more people don't visit the west side of Cook Inlet.

The Kenai Peninsula Borough West Side Developmental Task Force recently released a report outlining potential developments on the west side, as well as making recommendations to the Kenai Peninsula Borough for making the area more accessible for recreational use.

The task force concluded the west side is an underutilized portion of the borough, and offers potential economic growth for communities on both sides of the peninsula. Kenai could be used as a gateway to the west side, bringing more tourists to the east side and keeping them here for longer periods of time.

Assembly member Tim Navarre said there are no current plans by the borough for developing the west side, but the report is the first step in the process.

"Essentially it becomes a plan-

ning tool," he said.

For anything to go forward the borough can't act alone, Navarre said.

"It's going to take the public and private partnership on this," he said.

There were five specific recommendations for the development of the west side:

1. Apply for classification of a portion of Kustatan Ridge by the Alaska Department of Natural Resources for selection by the borough and subsequent sale to private owners;

2. Selection of a site and development of a deep-water public dock on the West Foreland;

3. Create road access from the future dock to the existing road system and provide access along Kustatan Ridge to the McArthur River;

4. Develop a plan to upgrade existing roads and trails in the focus areas of development;

5. Responsible development of private lands for recreation projects including lodges, wildlife viewing, kayaking and rafting services, mountaineering and other activities.

"Not everything in there could be done tomorrow," said Navarre. "It's a game plan."

Tom Wilkinson, part-time nurse and owner of Cook Inlet Ferry Service, said the borough is moving in the right direction.

"I think it's a good plan. We've been working on this for a couple of years now," he said.

Wilkinson owns land on the west side and envisions building cabins to rent to his ferry customers. According to Wilkinson, the McArthur River is an excellent area for salmon runs and if it were made more accessible, then more people would be attracted to the west side.

Task force member Jim Segura represents the Salamatof Native Association, which owns more than 9,500 acres in the study area. He said there are no current plans by the association to develop the land for recreational purposes.

"We don't have any development plans ... at this point," Segura said.

Segura said if the Salamatof Native Association determined there was a demand for the services and it was economically profitable, then the association would consider the idea of development.

Opinions about the development of the West side were not all positive.

Fred Elvsaas, who has owned

See WEST, back page

...West

Continued from page A-1

land and raised his family on the west side since 1951, thinks the idea of further recreational development on the west side is a bad one.

"I have lived, fished and raised my family at Kustatan for almost 50 years. I have seen my commercial and subsistence fishing eroded drastically by sport fishing in all the major salmon spawning systems of the Cook Inlet," Elvsaas wrote in a letter to the borough.

It is industries such as oil and gas, not recreational sports and tourism that builds the local economy, Elvsaas claimed. The recreational resources in the area have already been developed enough and further creation of roads and

airstrips will only mar an untouched wilderness.

He is not against oil, timber and mining companies operating on the west side, though. "I agree with the utilization of resources," Elvsaas said.

It is oil, gas, timber and mineral industries that Elvsaas said will "fill the gap" after the Cook Inlet gas and oil fields dry up.

"All the accommodations needed for tourists are already in place," Elvsaas said. "It's not like there's too many tourists for what's available."

Even if ferries were made cheap enough for most people to travel, once people got there there are no accommodations for them on the west side, Elvsaas noted.

"Where would they go?" he said. "The brown bears would get them."

Greg Bell of High Adventure

Air, a family owned and operated flying business that regularly takes customers to the west side, is concerned about making west side rivers accessible by road. He said people go to the west side to be in a wilderness setting, a place where they can't drive.

"Just don't start cutting roads," he said. "It will ruin the experience."

Vicki Pate owns land on the west side and hopes to build a hunting and fishing lodge. She hopes development of the area will progress slowly so that it will remain a relatively untouched wilderness area but said if the Kenai area wants to increase their tourism industry they will eventually have to expand the accessibility of the West side.

"I can say that if the people of Kenai want to expand the tourism industry then they're going to need to develop that area," Pate said.

Peninsula Clarion 6/18/98

Austrian fulfilling quest to work at SeaLife Center

By Roger Kane
LOG Staff

Originally from Vienna, Austria, Elisabeth Auberry came to Seward with the intention of working at the Alaska SeaLife Center and has thus far succeeded in her quest.

Auberry has been working on artwork at the SeaLife Center and has also completed some computer graphics projects.

She's created a teachers' brochure and an illustration of a wolf eel and is also working on another brochure while she works toward her ultimate goal—securing a research grant.

Auberry wants to study comparative anatomy at the SeaLife Center and to create textbook illustrations for marine biologists, zoologists and veterinarians.

In addition to volunteering her desktop publishing skills and creating educational illustrations, she is also working on a series of drawings she hopes to release for reprinting and sale by

When she was 13 years old, her love of science and exceptional intellect gained her admittance to the University of Vienna in Austria, where she studied biological sciences, marine biology and zoology for 16 years.

She's earned two Ph.D.s, a medical degree and a seat representing Austria at five conferences of the International Atomic Energy Agency. She is one of 30 women worldwide to participate as a representative in the 300-member agency.

She has also exhibited her artwork in 16 gallery shows while living in Austria.

Auberry has also worked as a medical and scientific illustrator and was employed by the University of Vienna medical school for six years. She also created illustrations for researchers and publishers in Austria and Germany for 13 years.

She's earned two Ph.D.s, a medical degree and a seat representing Austria at five conferences of the International Atomic Energy Agency. She is one of 30 women worldwide to participate as a representative in the 300-member agency.

winter.

Thus far she's completed two of the seven wildlife portraits she intends to create for the set. The first is a Dall sheep and the second is a bald eagle. She plans to add a porpoise, puffins, a mountain goat, a moose and possibly a wolf.

At the early age of 2 her skill as an artist emerged and Auberry said she's been drawing ever since. The woman with an IQ of 180 also has an impressive list of achievements.

She earned one doctorate degree in medical physics and physiology after studying the Chernobyl nuclear accident and the medical and biological

impacts of the radiation on people and animals.

The other Ph.D. focused on comparative neuro-anatomy and the correlations between the physical health of the human brain and intellectual development.

Some of the significant findings of her brain research include a way of accurately measuring the brain of a human by measuring specific dimensions of the skull. Auberry said she had measured more than 300 skulls, which confirmed her theory.

She said she kept her research a secret for a long time before publishing a dissertation of the findings in order to prevent others from taking credit for her



Medical illustrator Elisabeth Auberry has lived in Seward two months and is hoping to get a grant to study comparative anatomy at the Alaska SeaLife Center.

work.

Since moving to Alaska four months ago with her husband Vance Auberry, Elisabeth said she hopes to be able to create Alaska art as a second profession.

Judge refuses to lift Exxon Valdez ban from Prince William Sound

ANCHORAGE (AP) — The tanker Exxon Valdez remains permanently barred from Prince William Sound.

U.S. District Judge H. Russel Holland has upheld provisions in the Oil Pollution Act of 1990 that prohibits the ship from returning to the waters it fouled with 11 million gallons of oil in 1989.

Holland ruled June 4 that Exxon, whose shipping subsidiary is called SeaRiver Maritime, knew about the restrictive provision in 1991. That's the year the oil company signed papers to settle state and federal lawsuits stemming from the spill.

Exxon should have raised its concern before signing the settlement papers, Holland said. Under the settlement, the state and federal governments dropped their claims, the oil company agreed to pay \$1 billion, and both sides agreed it

was the end of litigation stemming from the spill.

"The release was sufficiently clear and SeaRiver knowingly, voluntarily, and intelligently waived its right to challenge" the part of the act that prohibited the tanker from returning to the Sound, Holland wrote.

SeaRiver Maritime spokesman Art Stephan said the company has not decided whether it will appeal Holland's ruling.

Exxon's attorneys had argued that the clause in the act that prohibited the tanker's return was unconstitutional and was unfairly directed only at the former tanker, the Exxon Valdez, which has been renamed the SeaRiver Mediterranean.

The ship has been operating in the Mediterranean Sea since 1990 and company officials said no decisions have been made about bringing the ship back to Alaska.

The Oil Pollution Act had been

under consideration for 10 years when Exxon's tanker spilled its oil, prompting its enactment in 1990. A section of the law was enacted specifically to protect Prince William Sound. The clause says in part, "tank vessels that have spilled more than 1 million gallons of oil into the marine environment after March 22, 1989, are prohibited from operating on the navigable waters of Prince William Sound." The Exxon Valdez ran aground March 24, 1989.

At the time the law was enacted, the Exxon Valdez was the only ship that fit the description. Since then, four other ships have joined the Exxon Valdez "with this dubious distinction," Holland wrote. But the other ships were left inoperable or were not U.S. vessels, therefore, the Exxon Valdez "is still the only ship to be barred" from the Sound by the law.

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Sun clears way for floating dock

By Colleen Kelly
LOG Staff

Rainy spring weather delayed Kenai Fjords Tours' plans to have a floating dock in place last month at the Alaska SeaLife Center. The project finally got to move forward as sunny skies held court in recent days.

"It's been ready to go in for the past two weeks, but the weather has been the holdup," said Tom Tougas, president of Kenai Fjords Tours, in a Tuesday interview.

"We put the anchors on this morning and hope to set the dock in this afternoon, if the wind doesn't interfere," he said.

A 114-foot ramp will connect the 28-by-116-foot dock to the uplands.

With the floating dock in place, it'll cut down the number of bus trips transporting cruise ship passengers from the small boat harbor to downtown and back, Tougas explained, while still allowing visitors to take in both downtown Seward and a wildlife boat cruise.

According to Kenai Fjords Tours' game plan, passengers coming into port in the morning can get off the cruise ship and go on a Kenai Fjords wildlife cruise from 8 a.m. to 2 p.m. The wildlife tour boat will pull up to the floating dock at the SeaLife Center and passengers getting off there will have about three hours to spend downtown.

"If they're Princess cruise ship passengers, then they'll get on a Princess bus" to leave Seward, Tougas said. Holland America cruise passengers travel on Gray Line buses.

It cuts out the transfer from the harbor to downtown and vice versa, he said.

For Princess and Holland America cruise passengers arriving in Seward from Anchorage or other points north, it's just the reverse, he said. They get here about 10 a.m. and then have about an hour and a half downtown before boarding the wildlife tour boat from the floating dock, Tougas said.

The tour company president

said they've projected a daily average of 100 visitors will utilize the new floating dock this summer.

The dock will be pulled about mid September at the end of the cruise ship season, Tougas said. "It's the same thing we do at Fox Island," he said.

The floating docks will be stored in the off-season at Seward Marine Industrial Center.

Kenai Fjords Tours signed a 20-year lease in January with the city of Seward for about 34,500 square feet of tidelands. Rent starts out at about \$1,380 per year.

According to lease terms, the floating dock will have one berth available for competing wildlife cruise tour boat companies.

In addition, Kenai Fjords Tours is leasing land from the SeaLife Center so it can provide a covered waiting area. Any tour company using the dock will have to pay the SeaLife Center rent of \$1 per passenger who embarks or disembarks.

KAYA R PARADISE

Shuyak Island provides adventure, cabin comfort

By NATALIE PHILLIPS
Daily News reporter

SHUYAK ISLAND — The loud hum of the Beaver airplane muffled my surprise as we circled to land on the far north corner of Shuyak Island.

I expected to be dumped off in a misty, old-growth spruce forest with a dense bed of lily ponds, ferns, skunk cabbage and other moist-climate vegetation. Instead, a rolling, green tundra carpet edged with rocky outcrops and bleached-white driftwood greeted me. There wasn't a tree in sight.

I'd always considered

Shuyak Island the lush emerald on the far north end of the Kodiak archipelago. I knew the place gets 3 to 6 inches of rain a month during the summer, and I had seen pictures of its thick forest.

During the past couple of years, I had written about Shuyak several times — first, when \$42 million of the settlement money from the Exxon Valdez oil spill was used to buy up 26,600 acres on the island for state park land. Two months before this trip, I wrote another story

when the Legislature voted to add those 26,600 acres to the existing 13,000-acre state park — making the whole island, minus a few private holdings, a park.

Shuyak Island State Park is now roughly 100 square miles, a kayaker's paradise. A maze of bays, crannies, protected coves, portages, bays and channels make up its western fringe, where four deluxe state park cabins, complete with propane lights and shower houses, dot the coastline.

My traveling companions and I visited for a week in June with collapsible boats. The state cabins on Shuyak often are readily available in June or July, offering a quiet — and dry — refuge. Come August and September, the place draws dozens of powerboats, with sportsmen seeking silver salmon and Sitka black-tailed deer.

We wanted to see the northern stretches of the island, but all the posh cabins are on the island's west side. So we decided to start on the north end and get the camping-in-the-rain segment over first, saving the warmth and shelter of the cabins for the end. If we got weathered in and the air taxi couldn't pick us up, we'd rather wait it out in a cabin.

Others choose to fly straight to the cabins and get dropped off with coolers, collapsible boats, fishing gear and supplies. It's a perfect setup for kayaking parents with young children. Two of the four cabins sit in Big Bay, which has protected waters and a number of day-trip possibilities. Kodiak District park ranger Claire Holland said most visitors opt for the latter.

Top-flight kayakers have circumnavigated the island in a day, though it can take two or three, even in good weather. Coastal tides can be tricky, she warned.

We fell somewhere in between. The windswept tundra at Pervallie Passage was the beginning of our week.

After assembling our double Folbot and Klepper kayaks, we spent the day exploring the whitewashed ruins of a World War II lookout post, which an army of terns and gulls have claimed. From the swells of tundra surrounding the post, we could gaze east to the Gulf of Alaska or west to Shelikof Strait.

Holland said the Army Corps of Engineers is removing the rotting buildings and cleaning up the site this summer. What can't be burned will be barged out, she said.

A wave-eroded bank revealed what appeared to be the decades-old remains of a young child. As the law requires, we left the remains in their place. I later talked to park officials who told me archaeologists were aware of the remains and a local Native group will decide their fate.

We spent the next two days working our way in and out of Shangun Bay and Whitey's Hole, and around Carshan Point,

where I was certain the long strands of kelp would trap us. For a neophyte birder like me, it was paradise. With binoculars tucked in my life vest, I was able to spot 10 species within the first few days, including a three-toed woodpecker, numerous oystercatchers, cormorants, a semi-palated plover, and a goldeneye with seven ducklings.

After three days of sunshine and three nights of camping, we pulled into the Deer Haven Cabin in Carry Inlet. Just two years earlier, a brown bear had come through the front window of this cabin, Holland said, making quite a mess. But overall, the Kodiak brown bears that live on Shuyak Island have caused few problems, she said.

After cleaning up, we dined on pai thai and cheesecake with a raspberry sauce.

As we moved west into the island's maze of inlets and bays, our morning coffee, lunch, snacks and dinner all became dictated by Thompson's Tide Table. The island's dramatic tides made paddling a game.

On the other side awaited the old-growth forest I had pictured.

On day four the weather cooled, but we still had not seen one of the island's infamous rainy days. Eagle Nest cabin was base camp for the next three days of hiking, day paddle trips and lounging.

All the cedar log cabins on the island are identical. Each is near the water's edge and, at \$50 a night, they're a bargain. Aside from propane stoves, each has a fresh water supply, a wood stove and a well-stocked woodshed. A hot shower means boiling a pot of water, hauling it to the showerhouse and pouring it into a five-gallon bucket equipped with a shower head. The labor is well worth it.

We had had the island pretty much to ourselves. On the first day, we spotted hikers. Later, we found a 20-foot sloop bobbing in the bay when we beached at the Eagle Nest cabin, but we never saw its inhabitants.

We explored Big Bay, which had a rocky outcrop at dead center that was thick with colorful harlequin ducks. Two of us ventured out in Shelikof Strait one afternoon with hopes of seeing whales. That was a mistake. Within hours of pointing our kayak's nose around Eagle Cape, the winds picked up and the waves began to break around us.

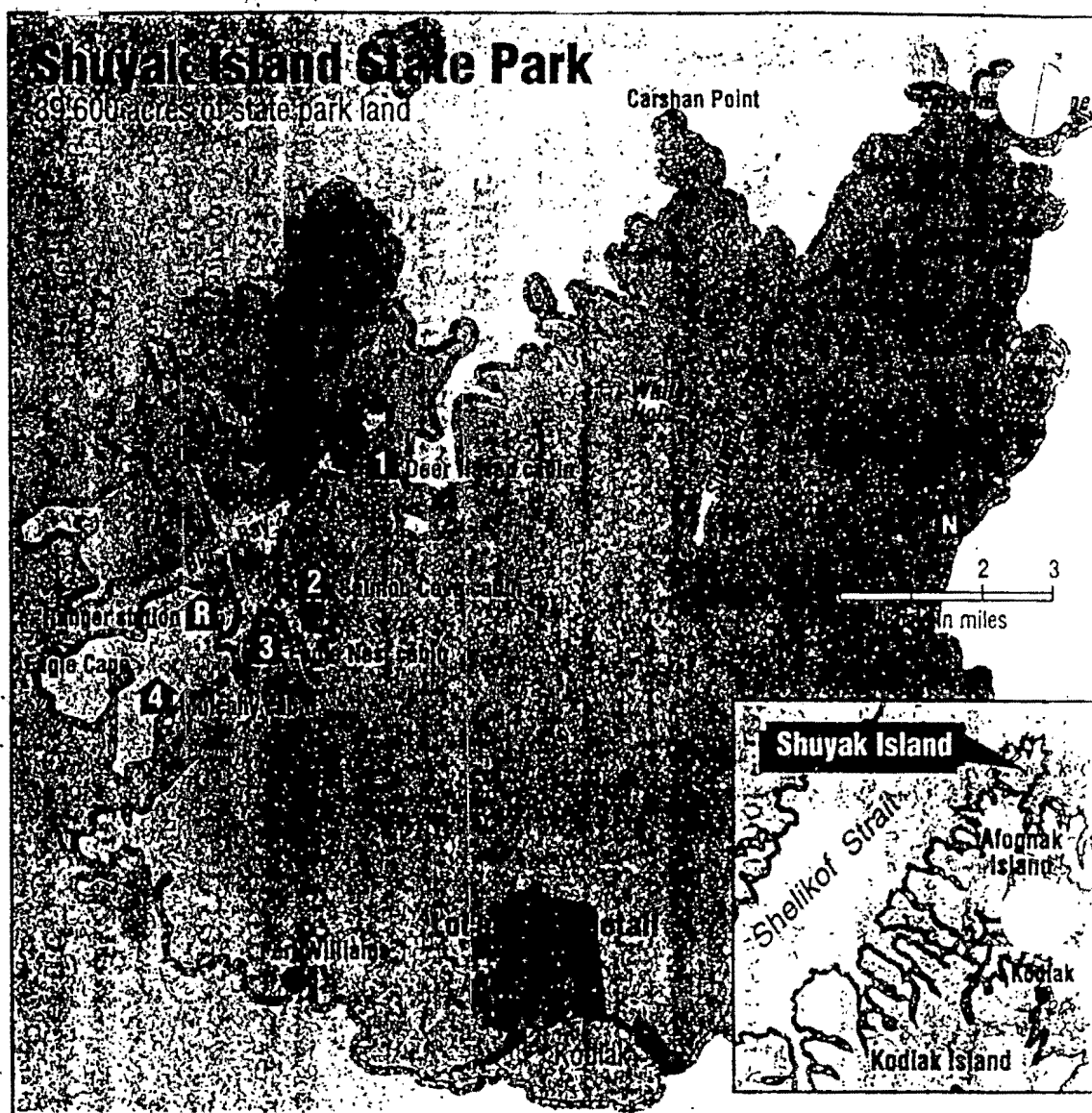
Turning back appeared too treacherous; pushing on didn't look much better. So we beached ourselves, built a fire and waited for the whitecaps to dissipate.

Fortunately, we had told the couple who remained behind not to panic until 12 hours had passed. Eight hours later, we braved the waters and finished what should have been a three-hour paddle.

We didn't see any whales, but we couldn't complain.

A seven-day trip to Shuyak and not one day of rain. Unheard of.

☐ Natalie Phillips is a Daily News reporter and a recreational kayaker.



Getting there:

Some charters that serve the area:

Beluga Lake Floatplane Service, Homer, (907) 235-8256
Kachemak Air Service, Homer, (907) 235-8924
Bald Mountain Air Service, Homer, (907) 235-7969
Uyak Air, Kodiak, (907) 486-3407
Kodiak Air Service, Kodiak, (907) 486-4446

Lodging:

Alaska State Park cabins — For information about the four cabins on the island and reservations call: Department of Natural Resources Public Information Center, 3601 C St., Anchorage AK 99503-5929, (907) 762-2261. Web site to check for cabin availability: <https://nutmeg.state.ak.us/ixpress/dnr/parks/kodiak.dml>

Port Williams Wilderness Lodge — The only lodge on the island is rugged and large and sits on the south end of the island. It's privately owned and houses up to 24. Caters to halibut fishermen. Minimum stay, two nights, is \$660. Call Y-KNOT Halibut Charter at (907) 688-2253.

Rental boats:

Wavetamer — The Kodiak-based company has hardshell kayaks stored at the ranger station on the island. Rental rates are for a three-day minimum at \$165. Call (907) 432-6044. E-mail: wavetamer@ptialaska.net

Folding Kayak Adventures — The Seattle company rents collapsible Feathercraft kayaks and ships them to you for \$75. Rental rates of about \$30 a day. Call (800) 586-9344. Web site: www.eskimo.com/%7Ekayakadv/index.html

Baidarka Boats — The Sitka company rents collapsible Naturaid and Klepper kayaks and ships them to you. Rate runs \$35 to \$50 plus shipping. Call (907) 747-8996. E-mail: 72037.3607@compuserve.com.

Kayak and Custom Adventures — Anchorage guide and outfitter that will rent collapsible Folboats for a week minimum at \$395. Call (907) 258-3866. E-mail: kayak@arctic.net.

Park information:

Alaska State Parks - Kodiak District Office ra...@alaska.gov 486-6339

RON ENGSTROM / Anchorage Daily

Scientists search for ways to predict fish returns

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing very within the spill region.

By JODY SEITZ

PENINSULA CLARION
6/21/98

1993 was a lousy year for both pink salmon and herring populations in Prince William Sound and for the commercial fishers who depend on them. It seemed no coincidence to fishers and residents of Prince William Sound that the disastrous fishing season fell four years after the massive oil spill of 1989.

It was the year that most of the herring which were spawned during the spill were supposed to return to spawn for the first time, and the fourth year in a row in which wild pink salmon eggs laid in oiled streams had higher mortality than those laid in unoled streams.

After fishers staged a blockade of the Alyeska line terminal and held many earnest discussions with scientists, an ecosystem-based study was created concentrating on Pacific herring and pink salmon.

The study, called the Sound Ecosystem Assessment, was funded by the Exxon Valdez Oil Spill Trustee Council in 1994. It consists of nearly 20 scientific studies linked together, incorporating

everything from ocean currents to plankton and fish production into a model of the ecosystem.

According to Phil Mundy, one of several independent scientific reviewers for the Trustee Council project, the SEA program is gathering data which are vital for helping salmon runs recover.

"Alaska is unusual in that it has a very good fisheries management program, yet we have not been able to collect adequate baseline data until we had the SEA program and other projects associated with oil spill research," said Mundy.

The spring plankton bloom is the cornerstone of the entire food web. Oceanographers have found fish populations don't just live on the sound's resident stocks of zooplankton, but that a lot of plankton is carried into the sound on currents from the Gulf of Alaska.

Resident stocks of pollock and cod also may affect populations of fish they prey on, such as herring and salmon.

Research has shown that a strong plankton bloom not only provides a good food supply for salmon fry and herring, but it also protects them from their



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predators. Cod and pollock tend to ignore the fish and, instead, target the easy meals of zooplankton.

Environmental conditions are very important for both pink salmon and herring. During the plankton bloom pink salmon smolt burst from the streams with their clocks ticking. They have 400 days to migrate to the open ocean, mature and return to spawn.

Herring larvae must drift with the ocean currents. Some make it to the safety of bays, where they metamorphose into juvenile herring and spend the next two years. Just as bears fatten up for winter, so do the herring. Just as there are berry patches, so too, there are plankton patches — some better and more productive than others.

"Some of the fish seem to be rearing in areas that at times don't provide the same amount of energy as other areas do and there is quite a range of energetic content as they begin the winter fast," said Ted Cooney, chief scientist for the SEA program.

Aside from ocean conditions and plankton production, other studies have shown that disease is another factor in controlling the size of herring populations.

Ultimately, these scientists want to be able to improve predictions of pink salmon and herring returns based on what the ocean environment did to the pink salmon and on the summer conditions in the herring nursery areas.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

Scientists learn more about herring stocks

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By JODY SEITZ
PENINSULA CLARION
6/14/98

Anyone who remembers the old herring fisheries in Prince William Sound can tell you it takes a long time for herring populations to increase once they're down. Exactly how they recover, no one really knows.

A year after the 1993 herring crash, scientists at the University of Alaska Fairbanks began to take a close look at Prince William Sound to see where and how herring survive the best. First they discovered that herring spend the first two years of their lives in bays. Then researchers focused on four bays where they often found juvenile herring. There they studied their food supply and the ocean currents, temperature and salinity of the bays. They sampled the plankton and tallied the types and amounts in each bay. Then they studied the condition of the herring and their stomach contents.

According to Robert Foy, UAF fisheries oceanographer, herring feed almost

exclusively on zooplankton. And they are choosy. The data showed the plankton the herring ate were not always the ones that were most abundant.

"That suggest it's energetically more favorable for them to be eating this prey rather than just opening their mouth and swimming through the water and picking up anything that's there," said Foy.

High-fat zooplankton such as calanoid copepods are one of the foods they prefer, but they aren't always available. Sometimes the herring have to put up with what's there. The amount of zooplankton available depends on the season, ocean currents and the amount of plant plankton produced each year.

Researchers conducted broad surveys of the sound, but focused on Simpson, Zaikoff, Eaglek and Whale bays. "We wanted to be able to compare the different sides of the sound and areas that might be a little more



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sheltered than others. Within each of the bays we had an inner, a middle and an outer site to compare distributions of (zooplankton) within the bays," said Foy.

They found that within each bay different species of zooplankton have their own particular niches, showing up in abundance in certain seasons and places. The data showed that nearly one-third to one-half of the zooplankton in the bays is the same as that outside of the bays. That means half the zooplankton in the bay are unique to that bay and may live there all year.

In summer of 1996, shallow, secluded Simpson Bay produced three to four times more food than Eaglek, Whale or Zaikoff bays. It also had the most juvenile herring.

"Ultimately what this suggests is that Simpson Bay may be a better rearing area for juvenile herring because it actually has a larger abundance of zooplankton than the other three bays," said Foy. Other bays with stronger circulation might not provide a good habitat, suggests Foy.

Researchers are still analyzing their data from 1995, 1996 and 1997, to see how the food supply changes from year to year.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

Oil spill trustees release '99 plans

By SHANA LOSHBAUGH
Peninsula Clarion

PENINSULA CLARION
6/24/98

The Exxon Valdez Oil Spill Trustee Council has released its draft work plan for 1999, the 10th anniversary year of the Prince William Sound environmental disaster. The plans include a symposium in Anchorage March 23-27, 1999, to reflect on the spill and summarize what Alaskans have learned about its effects.

The trustees' plan also includes about \$11 million in ongoing scientific studies and community projects. Much of the work involves the Kenai Peninsula, including the Kenai River, southern Cook Inlet villages and the Alaska SeaLife Center in Seward.

The draft work plan reflects the council's goal of reducing funding and completing current projects. Last year the trustees approved \$14 million for studies; this year their goal is \$10 million to \$12 million.

Overall, Exxon is paying \$900 million, mandated by the civil settlement against it, for restoration projects. The money is doled out in 10 annual installments, with Exxon's final payment due to the trustee council in 2001.

The council plans to close down after August 2002.

Part of the money collected has been set aside into a Restoration Reserve to be used after that time for ongoing cleanup and monitoring. Details of how the reserve will be administered and used still are being worked out.

The trustee council received 142 proposals, totaling more than \$25 million, for 1999. Last week the council put out a report outlining those proposals with recommendations from executive director Molly McCammon and chief scientist Robert Spies on which should be funded. They only gave complete approval to 14 projects. They recommended rejecting 62. The other 66 they tentatively endorsed, depending on more information or resolution of "certain issues."

Approved projects include continuations of major multi-year studies about the marine ecosystems of Southcentral Alaska. Scientists have compared uniled parts of Cook Inlet with damaged regions of Prince

William Sound to gauge the oil's effects. The Sound Ecosystem Assessment studies the long-term health of pink salmon and Pacific herring in the sound; the Nearshore Vertebrate Predator project focuses on river otters, sea otters, pigeon guillemots and harlequin ducks; the Alaska Predator Ecosystem Experiment looks at seabirds and the small fish they eat as indicators of environmental health. Results of these studies can be applied in other troubled areas, such as the Bering Sea.

"Spill-related research has provided an astonishing amount of information on the region," Spies said in the trustee council's 1998 status report to the public. "The goal now is to bring all this information together in a way that will allow us to assess the health of the north gulf ecosystem, provide new and better management tools and show what areas need further research so we can continue to improve our understanding of this region and its resources."

Eight of the projects the draft plan endorses would take place at the Alaska SeaLife Center, the state-of-the-art marine education and research facility that opened in May. The trustee council contributed \$26 million to building the center. Work there would involve harbor seals, river otters, pink salmon, rockfish and pollock.

McCammon and Spies recommended spending about \$300,000 for habitat restoration and recreation enhancement along the Kenai River at Slikok Creek and the Russian River. It is the fourth and final part

■ The draft work plan reflects the council's goal of reducing funding and completing current projects. Last year the trustees approved \$14 million for studies; this year their goal is \$10 million to \$12 million.

of a project sponsored by the Alaska Department of Natural Resources and the U.S. Forest Service.

"If funded, the trustee council will have invested nearly \$2 million in Kenai River restoration," Spies wrote, "which, in combination with the millions spent on habitat acquisitions and sockeye salmon research and management, represent a major contribution to Kenai River commercial, recreational and subsistence fisheries."

He and McCammon were less enthusiastic about proposals from the city of Kenai, seeking nearly \$1 million to improve dipnetters, access and reduce damage at the south side of the river mouth. They recommended rejection, urging the city to pursue less costly alternatives and partnerships with other entities.

In the Homer area, the report recommends approving nearly \$100,000 for habitat restoration at

Mariner Park at the base of the Homer Spit.

Regional Native communities actively are involved in the council's projects, including activities like improving village waste disposal, partnerships between hunters and biologists to collect information on seals and training local people to monitor the health of water sources and subsistence foods. Grassroots organizers began these projects in Prince William Sound, but now are expanding them to include the Kenai Peninsula villages of Seldovia, Port Graham and Nanwalek.

Oil spill funding also may rebuild the Port Graham hatchery destroyed by fire last year and construct an archaeology museum somewhere in the region, perhaps at Seward. The council also is involved in purchasing prime wildlife habitat in the region for

preservation, including a pending deal to transfer 3,254 acres from the Kenai Native Association to the Kenai National Wildlife Refuge.

The work plan is a draft document. The trustees are scheduled to issue their final funding decision in August. On July 27 there will be a public hearing on the plan by teleconference to all communities and villages in the oil spill region. A time has yet to be determined.

For more information, copies of the plan or to submit comments, contact the Exxon Valdez Oil Spill Trustee Council, 645 G Street, Suite 401; Anchorage, AK 99501 or phone the council at (907) 278-8012 or (800) 478-7745 (within Alaska) or (800) 283-7745 (outside Alaska). To contact the council by e-mail, write to: sandras@oil-spill.state.ak.us. Check out www.oilspill.state.ak.us for the trustee council Internet web site.

Activists hold up road project

By Jennifer L. Strange

The Cordova Times

Alaska State Troopers arrested six protesters who had chained themselves to a bridge at Clear Creek Monday to protest a road being constructed as part of a logging project near Carbon Mountain.

All six of the chained protesters abandoned what they termed as a peaceful demonstration against the logging project, slated for timber harvesting in 1999 and scheduled to continue until 2010.

Four protesters left the bridge on Monday, while two others remained chained to parts of the bridge Tuesday afternoon. After two attempts to remove the protesters from the bridge using a torch by con-

struction workers and troopers, the remaining two protesters voluntarily released themselves.

Arrested were Steve Vican and Rion Schmidt of Cordova, Sierra Drake, Amy Neel, Elijah Portugal and Nicole Morris, all of California.

Caught in the middle of the controversy is John Wilson, owner of Wilson Construction in Cordova and a fourth-generation bridge builder hired by Koncor Forest Products to build the bridge at Mile 41 on the Copper River Highway east of Cordova. After forming a partnership with Eyak Corp., planning the job and hiring a crew, Wilson started to do the work.

The only tricky part of the job was that it happens to be the first part of a series of bridges and roads to be constructed on the way to Carbon Mountain, a Chugach Alaska Corp. site about 40 miles into the eastern part of the Copper River Delta, which the corporation is scheduled to start logging in a couple of years. Never before has a road been built into this region, which is part of a watershed boasting hundreds of salmon-spawning streams, the world's largest population of trumpeter swans and Canada dusky geese, moose, bear, shorebirds and myriad other wildlife.

Enter a group of demonstrators, made up of local fishermen, environmentalists, a local Chugach and Eyak Corp. shareholder and 18 other people from California, Oregon, Washington and Anchorage. The demonstrators set up an "action camp" about two miles away from the construction site, proceeded to make signs and talk about the logging project and then, once construction on the bridge started, they took more serious measures.

At about 4:30 a.m. on Monday, of the demonstrators donned specially made contraptions of chains and steel piping, crawled under three of the bridge spans at the site and chained themselves together and around crossbraces, making it impossible for the bridge pieces to be placed on the waiting pilings in Clear Creek. They said their message was this: They opposed the development of the road and would do anything they could, short of violence, to make their opinion known.

"We are here to bear witness to this event and to stop the road," said Drake from under the bridge span. Drake was one of the last demonstrators to unlock themselves and be led to the Cordova Police Department in handcuffs. Drake released herself voluntarily after her partner, Vican, had come out from under the bridge following an attempt by construction workers to remove the cross brace with a cutting torch.

"You've made a good statement and I appreciate you expressing your distaste for this project, but this is my baby (the bridge) and it will really irritate me if I have to damage it," said foreman Bill Mehl while the extrication was being prepared.

Mehl and Wilson continued with the construction project once Drake and Vican were removed, but still faced the presence of the other demonstrators, who joined hands at the shore of the creek, sat in a circle and started talking about their reasons for being there.

"We put in a call to Gov. Knowles to take the meeting he suggested," said Dune Lankard of the Eyak Rainforest Preservation Fund in reference to the brief talk demonstrators had with Gov. Knowles when he was in town to sign a bill last Friday. "We want to call an emergency meeting to talk about this issue."

See Delay, page 9

Delay ...

From page 8

Though some locals think it is connected to the demonstration, the recent arrival of a Greenpeace ship in the Cordova harbor is purely coincidental, according to Greenpeace officials and Dr. Glenn Juday, a professor with the Forest Sciences Department at the University of Alaska Fairbanks. Juday said he is traveling with Greenpeace to Green Island and Columbia Glacier to visit study plots he set up several years ago to evaluate the budworm problem in Prince William Sound.

Local public opinion about the protest is varied.

Referring to the activists as "strangers from Outside," Cordova resident Marla Adkins said she "would have gone for a peaceful demonstration without chaining themselves and all these 'spectacularities' to the bridge."

"I don't like clear-cutting. I never have," Adkins said. "But I resent it when a state and a corporation has approval for a project and people are coming up here from the States and chaining themselves up to something and stopping a project."

Adkins said her tax dollars paid for the presence of the Alaska State Troopers and other law enforcement at the demonstration.

"The leaders of these things are never the ones who go to jail," Adkins said. "It's always the younger ones who are easily led."

Other Cordova residents, including some fishermen, said they wished they'd had time to attend the demonstration to show support.

Fisherman Thea Thomas said she is concerned about the effects the road-building, the crossing of 100-150 salmon-spawning streams and the harvesting of 8,000 acres of timber will have on the Copper River fisheries.

"We need to start focusing some attention on this road," Thomas said. "There hasn't been enough so far."

A community meeting to discuss the issues surrounding the Carbon Mountain timber project will be held from 4-6 p.m. June 27 at Bidarki Recreation Center.

Locals organized the meeting, which will focus on fishery issues, organizers said.

Center's visitor count passes 50,000 on June 12

Visitation numbers at the Alaska SeaLife Center surpassed the 50,000 mark as of June 12. Counting began with the May 2 grand opening.

The 300 memberships at the Alaska SeaLife Center represent more than 1,200 individual members.

Every day at 12:30 p.m. there are behind-the-scenes tours. Group size is 12 people. Sign up at the front desk. The cost is \$4.

Exhibits

June 1: This morning we put a female red king crab into the first-floor tank. King crabs are sexually dimorphic with respect to size, so she is much smaller than the male. She can also be identified by the underside of her new, clean white carapace. The clutch of eggs she is carrying will hatch next spring.

While on the topic of crabs, some visitors have mentioned that they thought the crab tank is over-

crowded. In fact, nothing could be further from the truth. In the wild, king crab aggregate in huge stacks called pods. The fact they are gregarious is the reason they can be caught fishing pots.

June 14: The rocky outcrop microhabitat on the second floor is up and running. One of the main attractions is the graceful decorator crab (*Oregonia gracilis*). There are also urchins, sea stars, scallops and other surprises that will undoubtedly be revealed by the "living rock" in this habitat.

The fish in the sandy sea floor habitat is a yellowfin sole.

June 16: We just placed an inter-

The SeaLife Scoop



Compiled by
Donna Harris

esting fish, the decorated warbonnet (*Chirolophis decoratus*), into the rock/sand borders microhabitat. The fleshy "goodies" sticking up from its head are called cirri (plural for cirrus). This fish is a member of the prickleback family (*Stichaeidae*), which makes it a close relative of the searcher in the harbor bottom tank.

June 17: This morning we put another decorator crab in the rocky reef microhabitat and within a few minutes the two crabs were mating. Some crabs grasp for extended periods, while others mate very quickly. The reproductive behavior of this species is unknown.

June 18: The high-tide habitat has been set up with all the hiding spots (i.e., rocks) near the front of the tank to make the fish easier to see — provided they cooperate. There are 15 fish: 13 high cockscombs and two crescent gunnels. These critters should be familiar to anyone who has spent even a few minutes turning over rocks

when the tide is out.

The high cockscomb (*Anoplarchus purpureus*) has a crest along the center of its head. Like the decorated warbonnet in the rock/sand border microhabitat, these fish are in the *Stichaeidae* family.

Although these little fish might not look that impressive, they can survive in conditions that would quickly kill most other fish. For example, they can live for 24 hours out of water by breathing air. High cockscombs are primarily carnivorous but they will graze on algae if necessary.

The crescent gunnel (*Pholis laeta*) is a much thinner fish than the cockscomb and can be easily identified by the crescent-shaped markings along its back. These fish are members of the *Pholidae* family and have been an increasingly important food item for pigeon guillemot chicks in Prince William Sound since the Exxon Valdez oil spill.

The biology of crescent gunnels is quite similar to that of high cockscombs with one exception: Gunnels typically do not guard their eggs, although one or both parents may occasionally check up on them.

The rocks in the high-tide habitat were brought in "live," so watch closely and you'll see mussels, barnacles and other critters in action.

Steller sea lions

Woody moved onto the ODL late last month. By June 1 he had reached a weight of 600 pounds — a 100-pound increase since his March 30 arrival.

We have begun once again to brush Woody's teeth with our new hand-held electric toothbrush. It had

been two months since his last brushing.

Rehabilitation

June 14: The harbor seal is doing well. He has been weaned and is now eating fish.

Jim Ramsdale has finished carving a Steller sea lion pup donation bank for the rehabilitation program. It is near the rehabilitation deck by the research deck overlook on the second floor. He will be carving a puffin for the rehab program to be placed in the front lobby.

The river otter project will begin collecting live fish to feed the otters this week. The fish will be put into the large ODL No. 5 tank for the otters to catch.

June 17: The harbor seal pup is out of quarantine and now in ODL No. 7 on the research deck. He is eating fish thrown into the pool. The next step will be to see if he can catch live fish. After that, he just needs to put on some weight before we release him.

Please check our rehabilitation board in the second-floor Discovery Gallery for updates and more information.

The SeaLife Center has a working relationship with Bird TLC in Anchorage. Raptors that are brought here are stabilized before being sent to Bird TLC for treatment. Only specific rehabilitation facilities in Alaska are permitted to treat raptors. To share the cost of rehabilitating injured birds, Bird TLC sends marine birds to the SeaLife Center for treatment.

Donna Harris is marketing director at the Alaska SeaLife Center.

SEWARD PHOENIX LOG
6/25/98

Sundberg to speak at Lisbon exposition

Alaska SeaLife Center Executive Director Kim Sundberg will be speaking at a June 29 workshop about protection of the sea at the Expo '98 in Lisbon, Portugal. The theme of the exposition is the International Year of the Ocean, according to a press release.

The exposition coincides with the opening of the largest marine aquarium in Europe, the Lisbon Oceanario, which was designed by Cambridge Seven and Associates. Cambridge Seven participated in the design of the SeaLife Center.

Sundberg will speak about the SeaLife Center at the workshop on the Development and Implementation of Economic Instruments for the Protection of the Marine and Coastal Environment by Local Governments. According to the release, the case history of the SeaLife Center is considered a good example for the workshop because it was funded in part out of the \$1 billion settlement of the Exxon Valdez oil spill.



Alaska Coastal Currents

By Jody Seitz

Search on for better fish return prediction

1993 was a lousy year for both pink salmon and herring populations in Prince William Sound, and for the commercial fishermen who depend on them. It seemed no coincidence to fishermen and residents of Prince William Sound that the disastrous fishing season fell four years after the massive oil spill of 1989. It was the year that most of the herring which were spawned during the spill were supposed to return to spawn for the first time, and the fourth year in a row in which wild pink salmon eggs laid in oiled streams had higher mortality than those laid in unoiled streams.

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plankton is carried into the sound on currents from the Gulf of Alaska. Resident stocks of pollock and cod also may affect populations of fish they prey on, such as herring and salmon.

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Ultimately, these scientists want to be able to improve predictions of pink salmon and herring returns based on what the ocean environment did to the pink salmon, and on the summer conditions in the herring nursery areas.

Barren Islands not quite as bare as before

HOMER NEWS

by Jody Seitz 6/25/98

Thousands of murres crowd onto a cluster of rocks in the Gulf of Alaska named the Barren Islands. Located at the mouth of Cook Inlet, and across from the lower Kenai Peninsula, the islands collect food as upwelling currents converge around them.

Last summer young common murres returned to the Barren Islands in greater numbers than scientists have seen since 1989. It's the strongest sign yet that common murres are recovering from the Exxon Valdez oil spill.

The Barren Islands were directly in the path of the spilled oil. Of the estimated 250,000 seabirds killed by the oil, 75 percent were common murres. But it's still difficult to compare the population of the Barren Islands before and after the spill, according to David Roseneau, of the Homer-based Alaska Maritime National Wildlife Refuge. The only pre-spill data available are two very rough estimates made many years earlier. In addition, there is evidence that populations of murres and other

seabirds already may have been declining.

Since 1989 scientists have been monitoring the bird populations consistently, looking for any signs of increase in the population. A large number of chicks were hatched on the islands in 1993, but the effect of those chicks on the population would not be seen until they returned as subadults three to four years later.

"So we anticipated that because about 10 to 15 percent of 3-year-olds come back and upwards of about 30 percent of 4-year-olds, that last summer would be the first year we'd have this 4-year-old cohort from 1993 and then we'd also have some birds from 1994, the 3-year-olds," Roseneau said.

Common murre chicks have to jump before they can fly. When the parents think they're ready, the males fly to the water and call to the chicks to jump off the ledge and down to the ocean. The males lead the chicks to sea. The chick learns to fly about 10 to 20 days later. While he's at sea with the chicks, the male molts. Once the chicks jump,

they remain at sea for the next three to four years.

In order to count the birds, scientists establish several sections or plots on all the islands. From a boat, two observers count the number of birds in each plot. Between the time of peak egg laying and the first seagoing of chicks, they count each main monitoring plot between five and seven times every day.

By Roseneau's standards, 1997 was a pretty exciting year. The young birds came back in droves. "All our counts from the various sets were as high or in most cases higher than the previous counts, since the spill," he said.

Previously barren ledges filled up. "We noticed that in areas that normally didn't support roosting birds, there were large numbers of non-breeding birds roosting and hanging out," said Roseneau. "Those birds mostly consist of 3- and 4-year-old birds from 1993 and 1994, two years when productivity was quite good."

Common murres don't usually breed until about 4 years old. The subadults are just beginning to look around their Barren Island colony for potential mates and nesting sites.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.



Alaska
Coastal
Currents

Restoration and recovery following the Exxon Valdez oil spill

HOMER NEWS
6/25/98

Understanding sea otters

Exxon Valdez oil spill engenders research that sheds light on these cute, cuddly creatures

The first time that James Estes dove in the cold waters around Shemya Island, he saw the difference. The waters were nearly devoid of the kelp forests that were common around the other Aleutian islands. They were also devoid of sea otters, an animal that thrives in marine habitats dominated by kelp beds. But Shemya waters abounded in sea urchins, which eat kelp leaves.

"I wanted to know what sea otters do as predators," says Estes, a wildlife biologist at the US Geological Survey (USGS) and an adjunct professor at the University of California-Santa Cruz. Since the 1970s, he has studied the relationship between otters, urchins, and kelp in Alaska and elsewhere. "I wanted to know what role otters play in maintaining the ecology of coastal kelp communities."

Estes's research and that of many other scientists has explored not only community ecology, but also many other aspects of sea otter biology and conservation. Their work, much of it funded following the 1989 Exxon Valdez oil spill in Alaska's Prince William Sound, has confirmed some earlier findings, confounded others, and, on occasion, generated controversy as scientists debate what their findings mean for sea otter conservation.

Few critters have a greater intellectual or emotional pull than the cute, cuddly sea otters. Their thick, luxurious fur, apparent sense of purpose, and seeming ease of life floating on their backs while bouncing up and down with the waves appeal to scientists, conservationists, and the public alike.

by Jeffrey P. Cohn

Cuteness notwithstanding, the animal's valuable coat almost caused the sea otter's demise. Probably one of the last mammals to adapt to life in the ocean, and the second smallest after a South American marine otter, the sea otter lacks the blubber that keeps whales, seals, and other marine mammals warm.

Instead, sea otters possess the thickest fur of any mammal. An estimated 800 million hairs, up to a million per square inch, cover their bodies. By comparison, dogs have no more than 60,000 hairs per square inch, and the average human head contains only 100,000 total.

Sea otters once ranged from northern Japan and the Kamchatka Peninsula across the Commander and Aleutian islands to Alaska and down the western coast of North America to Baja California. Hunted for their fur in the eighteenth and nineteenth centuries, their numbers dropped from as many as 300,000 worldwide to only a few thousand in Alaska and the Aleutians and a few dozen in California. Only the 1911 International Fur Seal Treaty saved them and other marine mammals.

Today, sea otters in California are listed as threatened under the federal Endangered Species Act, as depleted under the federal Marine Mammal Protection Act, and as a "fully protected mammal" under California law. They are also protected under Canadian and Russian laws. As a result of this protection, sea otters have made a remarkable recovery. Aided by translocation programs, they have reoccupied most of their former range. An estimated 150,000 sea otters now inhabit Alaska and the Aleutian Islands. Another 17,000-18,000 live in Russia and

northern Japan, 2200 in California, 1000 in British Columbia, and 500 in Washington.

Under current US Fish and Wildlife Service (FWS) recovery plans, the federal government will remove California sea otters from the endangered species list if their numbers reach 2650 for three straight years. Even if delisted, the animals will still be protected by the Marine Mammal Protection Act.

Moving otters around

One key to sea otter protection has been relocating animals from areas where they are numerous to areas from which they had disappeared. Such translocations have helped sea otters to recover along the southeast Alaska coast and in British Columbia and Washington. Further south, however, the latest sea otter relocation has not yet been successful.

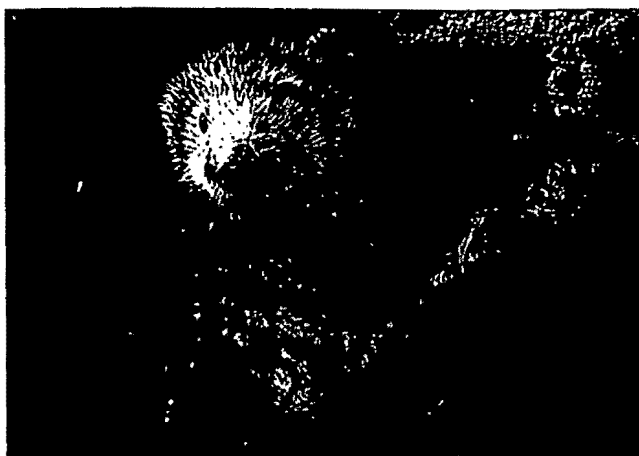
Fearing that an Exxon Valdez-type oil spill in California could affect most otters and, in a worst-case scenario, kill one-third of them, FWS moved 39 wild-caught animals to San Nicolas Island from 1987 to 1990. Biologists theorized that spreading the California population in this way would expose fewer animals to a major spill. San Nicolas, located in the Pacific Ocean 70 miles west of Los Angeles, once had sea otters, but they were exterminated early in this century.

Today, only about 15 adult sea otters remain at San Nicolas, says Brian Hatfield, a USGS wildlife biologist in San Simeon, California. Some may have been shot by sea urchin fishermen trying to protect their catch, drowned when caught in lobster pots, or simply disappeared.

But many probably returned to the California mainland or to the nearby Santa Barbara Channel Islands. "Sea otters seem to have a strong affinity for their home range," says Glenn Van Blaricom, associate professor of fisheries at the University of Washington in Seattle.

Nevertheless, research by Donald Siniff, a University of Minnesota ecologist, and Katherine Ralls, a research zoologist with the National Zoo in Washington, DC, indicates that the disappearing otters may simply be moving on to new territories. Using implanted radio transmitters, Siniff and Ralls found that male sea otters hang around one area for a long time, then leave. They seem to "take a trip," Ralls says of the animals' individualistic wanderings. Some males travel 100 miles from their original range.

Whatever the reason, some biologists refuse to call San Nicolas a failure. Van Blaricom cites the case of 59 sea otters that were translocated from Alaska in 1969 and 1970 to two sites off the Olympic Peninsula in Washington. Those at the southernmost site all quickly died or disappeared. The numbers of those further north, near Cape Flattery, remained at approximately 10-15 animals until 1980, when for unknown reasons the population began to grow by about 15% a year, says Ronald Jameson, a USGS research biologist in Corvallis, Oregon. The area now holds about 500 sea otters. The Washington population is doing so well, Jameson adds, that some animals have rounded Cape Flattery and expanded their range eastward. There, they are eating abundant sea urchins. Although urchins comprise about 1% of sea otter diets south of the cape, they account for more than 50%, and sometimes as much as 90%, of the diet to the east.



A sea otter on exhibit at the Monterey Bay Aquarium in Monterey, California. Photo: Monterey Bay Aquarium.

Threats to otters

Although sea otter populations have recovered well in British Columbia and Alaska, as well as in Washington, where population growth rates are 15-20% a year, the California population is growing by only about 5% yearly. The lower growth rate reflects a higher mortality in California rather than a lower birth rate: Siniff and Ralls found that 40% of pups die in California, a higher rate than elsewhere in the otters' range.

Ralls also found that young male otters feed and rest farther offshore than females and than had previously been thought. As a result, males off the California coast sometimes drown in gill nets set by fishermen. In a series of steps taken to protect seabirds as well as otters, California has banned the nets.

Another threat to sea otters in California waters comes from sharks, especially in the northern parts of their range. That may be one reason the otters have not yet extended their California range north of Point Año Nuevo, which is just north of Santa Cruz, despite good habitat beyond San Francisco Bay, Siniff says.

But these threats don't completely explain the high death rate of California sea otters. To investigate the cause, wildlife biologists in California have sent recovered carcasses to Nancy

Thomas at the National Wildlife Health Laboratory in Madison, Wisconsin. A veterinary pathologist, Thomas has performed necropsies on more than 250 California sea otters since 1992.

Surprisingly, Thomas says, 40% of the sea otters she examined died of infectious diseases, a high rate compared with wolves and other predators. In particular, pups and juveniles have been hit by a parasitic worm that normally infests sea birds. The acanthocephalan worm burrows through the animals' intestine into the

abdominal cavity, often bringing bacteria with it. Whether the animals die of the worm itself or from bacterial infection is not yet known.

Some otters have also been killed by San Joaquin Valley fever, a fungal disease usually seen in people living in arid areas. The fungus attacks the lungs and spreads to other organs. So far, only otters around San Luis Obispo at the southern end of the California range have been affected, Thomas says. How the fungus spreads from the San Joaquin Valley to the Pacific Ocean remains a mystery, although Thomas suspects it is carried in airborne dust. Whether and how many sea otters outside California also suffer from the disease remains unclear. Thomas hopes to compare infectious disease rates of California sea otters with those in Alaska, where recovery of carcasses is more problematic because of the difficult terrain and weather, fewer people to spot them, and competing scavengers.

In Alaskan waters, other threats have been more significant. For example, the *Exxon Valdez* oil spill had profound effects on otters. Pathologists from the Armed Forces Institute of Pathology (AFIP) in Washington, DC, and other institutions found that hypothermia combined with stress and energy depletion killed most oiled otters, says Tho-

mas Lipscomb, an AFIP veterinary pathologist. As the oil fouled their fur, the animals became chilled, spent their time grooming, stopped eating, and rapidly depleted what little fat they possessed. Some also suffered kidney and liver damage. As their condition worsened, the otters went into shock, suffered circulatory system failure, and died.

In determining causes of death, the scientists made a surprise discovery, Lipscomb says. Two-thirds of the oiled otters examined had lung lesions similar to emphysema. The lesions were three times more common in oiled otters than nonoiled. Unlike human emphysema, a chronic and fatal condition, the sea otter disease develops rapidly. It probably contributed to the oiled animals' stress but did not kill them.

But the otter kills did have a silver lining of sorts. From studies of more than 400 sea otters killed by the oil as well as live animals captured after the spill, the scientists were able to determine cause of death, reproductive rates, weights, and lengths for an entire population. "That's hard data to get unless you have a sudden die-off," says Brenda Ballachey, a private wildlife consultant in Calgary, Alberta, and a former USGS biologist in Anchorage who oversaw the studies. "We now have a baseline of basic physiology."

Picky eaters

Of crucial importance to sea otter protection is an understanding of the animal's foraging habits. Their eating habits have been studied by Estes and by Marianne Riedman and Michelle Staedler, the former and current senior research assistants at the Monterey Bay Aquarium in Monterey, California. Although sea otters consume more than 30 different shellfish and other prey overall, the scientists found that those in California waters are picky eaters. Each otter's diet is distinct from that of most others. And, although individual otters learn from their moth-

ers which foods to prefer, food availability also affects diet choices.

Indeed, says Staedler, most sea otters prefer to eat only two to four items. One otter's diet included 60% mussels, 12% purple urchins, and 4% kelp crabs. Another's was 62% urchins and 30% various crabs. Specialized diets, Staedler thinks, result from differences in food-gathering ability. Some otters may simply be better able to find and catch kelp crabs, whereas others can better dig clams out of bottom sediments. By specializing, though, sea otters can exploit different food items without depleting any.

Staedler also found that male sea otters often steal food from females. In fact, males get one-fourth of their diet by thievery. Even here, though,

Of crucial importance to sea otter protection is an understanding of the animal's foraging habits

males are selective, stealing only those items they prefer themselves.

In the Aleutians, other scientists have found sea otters that sometimes eat fish. This food item is quite popular with river otters, but sea otters lack the streamlined shape and sharp teeth necessary to catch and eat fish. Nevertheless, at Amchitka Island, they take advantage of good fortune when the Pacific smooth lump sucker comes near shore to spawn. Lump suckers are strange-looking grapefruit-sized fish with no scales and large disks on their bellies. The blue-skinned, slow-swimming lump suckers use the disks to hold onto underwater rocks while spawning. Usually deep ocean fish, they spawn in shallow northern Pacific waters.

When lump suckers come to Amchitka, which happens only once a decade or so, the easy availability of these fish reduces the time male sea otters spend foraging for food by

nearly one-fifth, says Thomas Gelatt, a University of Minnesota graduate student who studies otters with Siniff. Indeed, half of their diet may consist of the fish.

Not only do otters spend less time looking for lumpsuckers, they gain weight eating them, Gelatt adds, even during winter when food is usually harder to find. But females—perhaps because males steal any fish they catch—stick mostly to shellfish.

The time that sea otters spend foraging for food often depends on what they are looking for, says Siniff. Abalone, clams, and gravid sea urchins are large, high-quality prey with a lot of protein compared with starfish, mussels, and kelp crabs. The latter require more time and more dives to get the same food value. "Sea otters dependent on mussels are not doing very well," Siniff says.

Because they often lose prey to males, females typically spend more time looking for food, Siniff adds. At Amchitka, adult females devote an average of 43% of their time to foraging, compared with 38% for males. To keep from losing prey to marauding males, females learn to forage in different areas.

Beyond prey availability, other factors influence sea otter foraging at Amchitka. For three weeks after giving birth, females spend only 20% of their time looking for food, Gelatt says, mostly at night. With high metabolic rates and little body fat on which to live, sea otters are often active after dark throughout their range. For females, though, night foraging may be a way to avoid having their catch stolen by a male.

And females at Amchitka have another reason to be nocturnal, Gelatt says. The island is home to 60–70 nesting bald eagle pairs. Amchitka waters lack the dense herding, salmon, and other fish populations available in Prince William Sound and elsewhere. As a result, the eagles, which are normally fish eaters, may snatch unprotected otter pups from the water. Females do not dare leave their young alone for long,

especially during the day. As the pups get older and less vulnerable to eagles, females spend more time foraging overall, but less at night.

Otters, urchins, and kelp

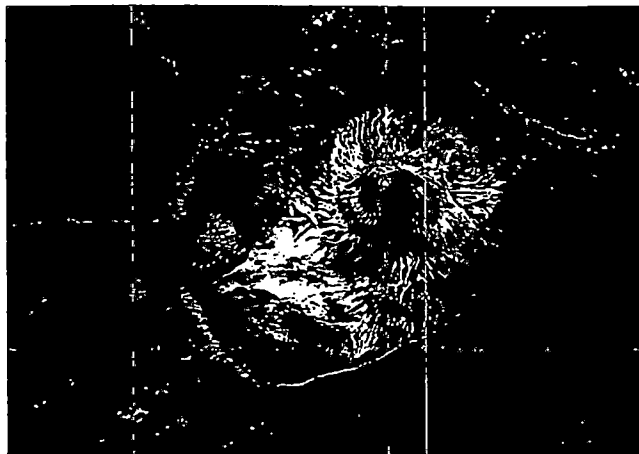
Sea otters prefer coastal marine habitats dominated by kelp stands. These plants, various species of algae, can reach 125 feet from the sea bottom to the surface. They provide shelter and food for countless fish, shellfish, urchins, and marine birds and mammals.

Estes found that coastal areas in Alaska and the Aleutians that lacked sea otters had plenty of sea urchins and little or no kelp. Areas that the otters had recolonized, however, had bountiful kelp and few urchins. "It's very striking," he says of the correlation between otters and the abundance of urchins and kelp.

And, at first glance at least, that correlation is easily explained, says Estes. When otters disappear, sea urchin numbers rise. Undeterred by a major predator, the urchins eat the kelp. When otters return, they eat the urchins, which allows the kelp to regrow.

Where sea otters are abundant, urchins are usually small in size and confined to cracks and crevices among rocks on the ocean floor or to waters beyond a 10-fathom depth, where sea otters rarely tread. Outside the sea otters' coastal range, or where the otters have disappeared, sea urchins are the most common herbivore, Estes says. In another study, Estes found that 50% of the kelp forests were gone from sites around San Nicolas Island. He attributes the kelp's disappearance to urchin abundance in the otters' absence prior to relocation in the late 1980s.

Estes's work has been confirmed by a study in southern Alaska by James Bodkin, a USGS wildlife bi-



A Monterey Bay Aquarium sea otter in a characteristic lounging pose. Photo: Monterey Bay Aquarium.

ologist in Anchorage. He and his collaborators found that urchin numbers and, perhaps more important, size increased in areas where sea otters declined after the 1989 *Exxon Valdez* oil spill in Alaska's Prince William Sound. In preliminary findings from an ongoing five-year study, the researchers found that in areas where sea otters were reduced after heavy oiling from the spill, an average of 1.52 large (more than 20 millimeters in diameter) sea urchins occurred per 100 square meters. In other, nonoiled places, where sea otters are still plentiful, they found only 0.17 large sea urchins per 100 square meters.

Sea otters affect populations of other animals as well as urchins. Mussels and barnacles are filter feeders that eat, among other items, detritus from kelp leaves. Estes and David Duggins, a research biologist at the University of Washington's Friday Harbor Marine Laboratory, study the shellfish at four Aleutian islands. They found that mussels grow two to four times faster, and barnacles up to five times faster, at Adak and Amchitka islands, which have otters, than at Shemya and Alaid-Nizki islands, where sea otters do not occur.

The relationship between sea otters, urchins, and kelp forests fits a theory that Estes has developed about

how the presence of sea otters has shaped kelp evolution. He notes that kelp and other algae in Australian waters produce toxins that ward off urchins and other marine herbivores, whereas kelp in North America lack chemical defenses. He speculates that North American kelp evolved with otters, and so did not need chemical defenses.

Although most scientists seem to agree with Estes's theory, at least for Alaska, some think that the role sea otters play in controlling urchins and protecting kelp

is overstated. Michael Foster, a professor of marine sciences at the Moss Landing Marine Laboratory near Monterey reviewed surveys done at 230 sites in California that lack sea otters. These are areas where urchins, if Estes is correct, should have destroyed the kelp forests, Foster says. Instead, Foster found that only 5–10% of the sites are deforested.

Foster thinks that storm surge and other predators combined with natural variations in urchin numbers help to control the prickly echinoderms. "Otters aren't necessarily needed to preserve kelp" in California, he says. Foster agrees, though, that otters can allow kelp forests to expand their range.

Duggins agrees that the relationship between otters, urchins, and kelp is complicated in California by factors other than sea otters. And, he adds, urchins do not destroy kelp as uniformly in California as in Alaska. Nevertheless, he says, "there is not as much disagreement as some think. The patterns people see in California are really very similar to the ones we saw in Alaska."

For his part, Estes argues that Foster depended on scientists who looked for kelp forests largely where kelp exists, not where it has disappeared. Still, like Duggins, Estes admits that the relationship between otters, urchins, and kelp in Califor-

6/27/98

Easement may doom legislation

Native group wants route to harvest timber

By JIM CLARKE
The Associated Press

An effort by the state's congressional delegation to make sure a Native corporation can get to some timber it owns and wants to harvest has prompted a veto threat from the White House.

The measure, in the House's version of the \$13.4 billion Interior appropriations bill, requires the U.S. Forest Service to give the Chugach Alaska Corp. a 250-foot wide private easement through the forest east of Cordova.

Proposals originally called for the easement to be 500 feet wide, but the House Appropriations Committee narrowed it by half.

Environmentalists have consistently opposed development in the Carbon Mountain area, where the Native corporation owns 73,000 acres. Earlier this week, six protesters chained themselves to a bridge section in an effort to stop initial construction of the 29-mile logging road that the easement clears the way for.

In a letter to the committee, the Clinton administration listed the Chugach easement language as one reason it would veto the spending bill.

"This language exempts this easement from all environmental laws and is unnecessary because an agreement between the Chugach Alaska Corp. and the Forest Service was reached in 1992, and implementation of the agreement is proceeding swiftly," said the letter from Jack Lew, the acting director of the White House Office of Management and Budget.

Lew also complained that the easement was too wide and that the Forest Service and the corporation already had agreed to make the road public, not private.

Officials from the Native corporation complained to

the state's congressional delegation earlier this year that the Forest Service was dragging its feet in granting the easement.

Chugach Alaska has been working with the agency since 1982 to get permission for the road.

Their complaints prompted U.S. Sen. Frank Murkowski to introduce legislation requiring the Forest Service to grant the easement by Dec. 11.

Chugach National Forest spokesman Doug Stockdale said the agency has been working with Chugach Alaska and is sure it will be able to grant the easement by the deadline.

"We believe that the

amendments that are being offered now are not needed. We think the easement that we're working on now will get done," Stockdale said. "I don't think there's faith on the part of the congressional delegation that we can effect our agreement."

The protesters who blocked road construction said they are worried the road would jeopardize salmon streams that empty into the Copper River and provide spawning grounds for the region's lucrative red salmon fishery.

The last of the activist was arrested Tuesday. They have been charged with trespassing, resisting arrest and other misdemeanors.

Marine advisory program may sink

by Chris Russ
Staff Writer

The fate of the Marine Advisory Program in Homer is uncertain.

Never heard of the one-stop shop for information on literally anything marine-related? It's an extension program that is administered through the University of Alaska Fairbanks School of Fisheries and Ocean Sciences and has offices in coastal communities from Petersburg to Bethel.

It's a tiny office located in a nook upstairs in the blue building formerly occupied by National Bank of Alaska. As small and tucked away as the office may be, those who venture inside discover a veritable marine resource library.

There are videos on how to hang gillnet, fiberglass boat repair, the art of filleting salmon and how to sail. Films

and printed information on mariculture in Alaska show how to jump through the hoops to do it.

A lot of people interested in oyster farming, others looking for ways to market their fish products or to develop other kinds of seafood, and even schoolchildren have used the Marine Advisory Program here to meet their needs.

The recent retirement of the Homer office's longtime Marine Advisory Program field agent, Doug Coughenower, coupled with state funding cuts to the university system have blown an air of uncertainty over the local resource.

"We are hoping the position doesn't totally get lost," said administrative secretary Christie Gates, who has kept the office running since Coughenower's retirement.

Thursday, June 25, 1998

HOMER NEWS

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... Sea Grant program lauded by those who know it

From Page One

Coughenower started Marine Advisory Program offices in Dillingham in 1982 and in Homer in 1985. He retired at the end of May.

His expertise in recreational fishing, the charter boat industry, and tourism issues will be missed, said Derotha Ferraro, Homer Chamber of Commerce Director.

Over the years, Coughenower has created and compiled various surveys on behalf of the Marine Advisory Program that produced information beneficial to the chamber, she said.

"Because of Doug's presence," she said, "we were able to generate specific information on Kachemak Bay. He was our statistics man."

The chamber used such information to learn about everything from Homer's economic benefit in the winter king sportfishery to the size of the halibut derby.

Having a Marine Advisory office in Homer has benefited many individuals, businesses and organizations.

"One of the reasons 'Darkened Waters' is in Seward right now is because of Doug Coughenower and Tom Smith, the manager of the Marine Center in Seward," said Mike O'Meara, the Pratt Museum's special projects coordinator.

"Darkened Waters" is the museum's traveling exhibit about the Exxon Valdez oil spill. Marine Advisory Program research information has been used in several Pratt Museum exhibits, including the newest one on the spruce beetle infestation on the Kenai Peninsula.

"I would really hate to see it go," O'Meara said, "especially now that NERR (National Estuarine Research Reserve) is coming on line," he said. "All these things can backstop each other and produce some powerful research."

Rick Steiner, a Marine Advisory Program agent in Anchorage and associate chairman of the program, said several positions like Coughenower's vacated through retirements in the past several years couldn't be filled because there no longer is enough state money to support them.

He estimated that it costs about \$800,000 to run the program statewide. About 60 percent comes from federal Sea Grant funds and 40 percent in state dollars allocated to the University of Alaska, and he is hopeful the money will be available for a Homer position.

"We intend to fill the position with a part-time marine advisory agent," said Steiner. "We consider Kachemak Bay, Cook Inlet and the Kenai Peninsula an important region."

Steiner said that he and other Marine Advisory council members still have to make a recommendation to the people who

have the final say. The School of Fisheries director, the Alaska Sea Grant director and the University chancellor all have to give their blessing before anyone fills Coughenower's position.

Steiner said university officials will have a better idea in a few weeks about what will happen to the Homer office. The worst case scenario is to close it down and the best case is to staff it with a full-time agent, said Steiner. A half-time agent could be hired or a full-time agent elsewhere in the state could relocate here.

It's important to replace the person, Steiner said. "We have lost perhaps half of the program in the last decade. The need is growing for information and our capability for meeting it is shrinking."

The Marine Advisory Program office in Homer is open 9 a.m. to 1 p.m., Monday through Friday. It's located at 1014 Lake Street, Suite 201 B.

Research yields practical results for fisheries

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing recovery within the spill region.

PENINSULA CLARION
6/28/98

By JODY SEITZ

Ever since the 1989 Exxon Valdez oil spill, one of the most extensive marine science programs in the world has been under way in Prince William Sound, lower Cook Inlet and the northern Gulf of Alaska.

The Exxon Valdez Oil Spill Trustee Council has been able to provide many millions of dollars each year to better understand the marine environment in the spill region. About \$14 million is being dedicated this fiscal year to research and restoration activities.

Guiding all this is an independent team of scientists from throughout the United States who review research projects, including methods, goals and results, and provide overall direction to the trustee council's research and monitoring efforts.

The process of having a team of independent scientists who guide the overall research program is unprecedented, according to Dr. Bob Spies, chief scientist for all trustee council research efforts. "This is the first time that a group of independent scientists has been able to shape a research program of this size over such a long time period in the United States,"

Spies said.

Phil Mundy, principal of Fisheries and Aquatic Sciences in Oregon, provides the fish-

eries expertise on the review panel. He has extensive experience with fisheries management and large fisheries restoration projects in the Pacific Northwest. He currently advises Indian tribes, the National Marine Fisheries Service and the Northwest Power Planning Council on the expenditure of funds for recovery of endangered salmon runs.

Each reviewer has a particular focus. Mundy's is to make sure fish managers get useful information from the research projects. Fish managers need to understand how natural factors impact fish populations, and Mundy's job is to focus the research to help provide the information and tools managers can use.

For example, scientists suspected that disease controlled herring populations for a hundred years, but no one had proof. With council funding, scientists have conducted the research and published the first study ever of control of herring populations by disease organisms. Research has not only produced new knowledge, it also has allowed implementation of known techniques such as otolith marking and genetic markers to identify hatchery and wild salmon stocks.

The use of genetic markers to manage the



Alaska
Coastal
Currents

Restoration and recovery following the Exxon Valdez oil spill

Russian River sport fisheries is one example Mundy gives of research leading the world in identifying salmon.

"We're now able to see Russian River late run sockeye amongst all the millions of Kenai River sockeye that come back. They can be identified during the season in a very short amount of time so that the managers can adjust the harvest of the Kenai to allow the late run sockeye into the river for the sports fishery," said Mundy.

Another research effort helped answer longstanding questions about the impact of sockeye overescapement on the lake-river systems. For the first time, researchers proved overescapement reduces salmon returns and that managers have to look at more than one year to make sense of salmon escapements.

Weathered oil toxicity studies yielded the most shocking discoveries. Levels of weathered oil as low as the state water quality standard can damage salmon eggs. Oil in the sediments of salmon streams damaged wild pink salmon eggs for five years after the oil spill.

Finally, blood chemistry studies of marine mammals, seabirds and ducks found that nine years after the oil spill they still show signs of contamination, though the health implications of the exposures are not known at this time. Mundy estimates that our knowledge of marine science, particularly in fisheries, has advanced by more than 50 years during the last six years of intensive research.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

nia differs from that in Alaska. Overgrazed kelp forests are found in central California waters, but not in southern or northern California, even where there are no sea otters, he says.

Meanwhile, whatever the controversies, Jim Estes thinks sea otters are important and interesting animals to study. And practical, too. "They can be seen on shore or in the water," he says. "They don't run and hide in bushes or disappear into holes. You can follow them in a boat or plane. They are just so easy to study."

"Sea otters are a keystone species," Estes adds. "They affect their ecosystem and biological community to a far larger degree than would be predicted from their abundance." □

Jeffrey P. Cohn, a Takoma Park, Maryland-based science writer, is a frequent contributor to BioScience.



RELIABILITY *and* AFFORDABILITY

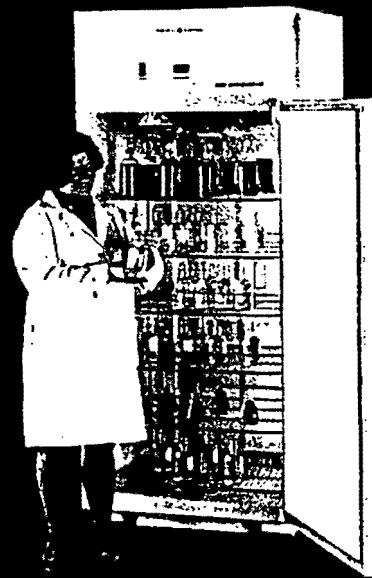
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Obituary

Philip M. Totemoff

Lifelong Alaskan Philip Mike Totemoff, 62, died June 23 at his daughter's Anchorage residence.

A visitation was held last Thursday at 10 a.m. with the Panihida Service beginning at 11 a.m. at St. Innocent Orthodox Cathedral. Reverend Archpriest E. Nicholas Molodyko-Harris officiated. Additional services were held in Chenega Bay, where a Panihida Service was held last Friday at 9 a.m. with the funeral service at 1 p.m. at the Nativity of the Most Holy Theotokos Orthodox Church in Chenega Bay, with burial in the parish cemetery. Acting as pallbearers were Cyril Andrews, John Pipkin, Jerry Selanoff, Chuck Totemoff, Michael Vigil and Lloyd Kompkoff.

Mr. Totemoff was born July 26, 1935, in Valdez. He was a retired commercial fisherman and a former board member of the Chenega Corporation and member of the Chenega Bay IRA Council. He was recognized for his longtime service to the Chenega Corp. and his service on the board of directors.

Mr. Totemoff enjoyed fishing and hunting, his grandchildren, and being with his family.

His family said, "Philip lived and left his life surrounded by family and friends. He was loved by all and will be greatly missed."

He is survived by his wife Shirley, son Chuck, daughters Phyllis Pipkin and Patti Andrews, brothers Jack Kompkoff and John Totemoff, and sisters Viola Tiedeman, Helen Morrison, Anne Maue and Arlene Weiss. He also leaves his grandchildren, Beth Ann, Tanya and Michael Pipkin, Kelly Barker and Amber Totemoff.

Arrangements were by Evergreen Memorial Chapel.

Smaller tractor tugs to be used until big ones are built

By Tony Bickert
Valdez Vanguard

Two "tractor" tugs will be added to Alyeska Pipeline Service Company's fleet of conventional tanker escort vessels by July to help prevent another major oil spill, Gov. Tony Knowles and Alyeska announced Saturday.

The two 5,500-horsepower, "Protector" class tugs will be used

until two larger, 10,000-horsepower tugs are built and put into operation by 1999.

Crowley Marine Services is building the bigger tugs for Alyeska at a cost of \$15 million apiece. The smaller tugs will cost Alyeska a combined \$6 million a year.

"These 'Protector' tugs are a good example of the industry's willingness

See Tugs, Page 9

Tugs...

From Page 1

to go the extra mile to have the best escort team possible," said Alyeska President Bob Malone.

The industry is required by law to employ "best-available technology" in preventing spills ever since the Exxon Valdez ran aground off Bligh Reef in 1989, leaking 11 million gallons of North Slope crude into the sound.

Since 1989, Prince William Sound Regional Citizens' Advisory Council President Stan Stephens and Department of Environmental Conservation regulator Dan Lawn have been urging industry to employ tractor-tug technology. But shippers had for years fought the tractor tug idea, calling for more studies.

The latest sea trials conducted in 1997 in Puget Sound finally convinced shippers, regulators and the RCAC that the tractor tugs' superior speed, seaworthiness and maneuverability (they can turn on a dime) could "save" a stricken tanker more quick-

ly than a conventional tug in the area of the sound where speed and maneuverability is most important: the mile-wide Valdez Narrows.

Tests were also conducted last year on Protector class tugs, but the results were inconclusive and no plans were made to employ them, until Saturday's announcement.

"From the standpoint of the RCAC and the residents of the Sound, we are very happy to see this positive step in the direction of spill prevention," Stephens said.

The Vanguard

July 1, 1998

Page 4

The problem is Exxon's attitude

When the Exxon Valdez is mentioned, two types of ignorance appear.

The first is the uninformed fear that the vessel that caused the Prince William Sound spill and should be forever barred from Alaska's waters. Other than not having a double hull, the Exxon Valdez is one of the newer and safest tankers in service. The ship is no more the cause of the disastrous grounding and spill than is a loaded gun involved in a shooting accident. Without anyone to pull the trigger, there can be no accident. Capt. Hazelwood did not fail an alcohol breath test; he failed a test in good seamanship. In an icefield in a fairly close and reef-filled area, he should have been on the bridge. Instead, he left a mate with questionable abilities in command.

The other is the form of ignorance and arrogance displayed by Exxon. After the waste of money and the overbearing attitude by Exxon in treating the spill, this comes as no surprise. I believe that most any other major oil company, like Arco, with good public relations could have spent far less money, obtained as good or better results and survived the ordeal with public approval.

I have heard that Exxon is run from an engineering or technical outlook, with a "public-be-damned" attitude. This would explain its failure to communicate with the rest of us.

Andrew S. Day
Valdez

Valdez Star 7/1/98

Artifacts From Spill Likely To Go To Kenai

KENAI (AP)--A regional "archaeological repository" is in the works to house Native artifacts found during the 1989 oil spill cleanup and likely will be built somewhere on the Kenai Peninsula.

The Exxon Valdez Oil Spill Trustee Council is currently soliciting proposals for an appropriate museum to place the artifacts on public display.

Native artifacts were discovered and salvaged during the oil spill cleanup in 1989 and 1990. The project involves eight separate communities and could cost about \$2.8 million, officials said. It's scheduled for completion by September of 2001.

The repository project is unusual because it links remote villages with state-of-the-art museum tech-

nology, officials said.

The repository will serve as a central museum and will sponsor eight satellite exhibits to rotate among the other communities, officials said.

Trustee guidelines require that the repository be open to the public, become financially self-sufficient, work closely with the villages involved and use professional museum curators and preservation techniques.

The project's purpose is to increase awareness and appreciation of the cultural heritage of people in the spill area, officials said.

The council expects the repository to sponsor education programs and underwrite projects aimed at restoring and protecting archaeological sites.

State of Alaska
Office of the Governor

Tony Knowles
Governor
P.O. Box 110001
Juneau, Alaska 99811-0001
NEWS RELEASE



Bob King
Press Secretary
Claire Richardson
Deputy Press Secretary
907-465-3500
FAX: 907-465-3533

FOR IMMEDIATE RELEASE: July 2, 1998

98-182

KNOWLES DEDICATES BING'S LANDING CAMPGROUND ON KENAI
First campground to close its banks to fishing to protect habitat

KENAI—Gov. Tony Knowles today dedicated the newest enhancement project on the Kenai River, the Bing's Landing Campground. "Bing's Landing is the newest addition to our efforts to protect habitat and provide responsible recreational access on the Kenai river," Knowles said. "Our comprehensive approach to the Kenai includes purchasing some parcels and protecting them for present and future generations, while providing responsible recreational access at other locations."

Dedication of the campground marked the second phase of the Bing's Landing project, named after Bing Brown who used the landing as a starting point for his Kenai River guiding business. Phase one, construction of a parking lot and public boat launch, was completed in 1988.

"This campground is special because it's the first to have its banks closed to bank fishing to protect riparian habitat," Knowles said. "Trails have been relocated to funnel the foot traffic into less sensitive areas and the river bank has flourished."

The governor also announced the Exxon Valdez Trustee Council has agreed to provide the State of Alaska \$450,000 to acquire 76 acres along the Kenai River near Soldotna owned by Elmer and Ellen Patson. "This acquisition assures the protection of outstanding riparian habitat along the Kenai River, including about 1,500 feet of shoreline," Knowles said. The protected habitat includes low, overhanging grassy banks for fish rearing, extensive wetlands for maintaining water quality and forested uplands. The acquisition will benefit pink, sockeye, coho and king salmon as well as dolly varden.

"Over the last three and a half years, we have completed 31 private waterfront demonstration projects; purchased over 217,000 acres of land, not including the Patson parcel; and closed 19.4 miles of riverbank to protect habitat," Knowles said. "At the same time we've constructed several responsible recreational access projects along the river, including Cooper Landing and Pillars Boat Launch, Soldotna's Centennial Campground, Funny River and many more."

Knowles plans to dedicate the site for the new Kenai River Center later this summer.

Zatz wins Emmys for 'Animals'

by Chris Russ
Staff Writer

Homer cinematographer Daniel Zatz's video "Alaska's Coolest Animals" was hot enough to earn him two Emmy Awards recently.

Zatz garnered the Northwest Regional Emmy Awards for best cinematography and best children's film for his video, which came out at the end of last year.

Earlier in the year, it earned Best Independent Film at the International Wildlife Film Festival in Missoula, Mont.

"I'm very excited and honored," Zatz said Monday from Cordova, where he was filming for Greenpeace. He said he is grateful for the praise he has received locally, but said it's good to have a professional review of the film.

However, winning isn't everything for the 35-year-old filmmaker.

"What means the most to me," said Zatz, "is the people who have kids that are enjoying these images."

Getting Emmy Awards isn't exactly old hat for Zatz — he now has four to his credit. His film "Bears!" won an Emmy for Best Cinematography and "Biggest Bears" won Best Children's Film.

"Alaska's Coolest Animals" contains cream-of-the-crop footage he captured while filming in the state during the past eight years. "It was the culmination of my best efforts," he said.

Memorable moments in the film include humpback whales feeding, otters playing and snoozing, and frisky bears.

Zatz is an industrious filmmaker who doesn't limit himself to what equipment is available. He occasionally builds what he needs.

"The most exciting images are the ones done through the robotics," Zatz said. His technical know-how made it possible to capture images of peregrine falcons, snowy owls and baby eagles in their nests. "There is just a lot of cool stuff that happens when you're close to wildlife that couldn't other-

wise be achieved."

His early work with robotics planted the seed for the Pratt Museum's "Wild-Eyed Alaska" remote video link to Gull Island. Because of the exciting possibilities in remote video, Zatz started the company

SeeMore Wildlife Systems. Scientists could stand to benefit, he said. Zatz is already working on establishing a 50-mile link from Chiswell Island, located near the mouth of Resurrection Bay, to the Seward SeaLife Center for sea lion research, and he has his eyes on McNeil River and, perhaps, the Barren Islands for other video links. Zatz will take portable remote system on the road this fall to pitch it to researchers around the state.

Zatz, a seven-year resident of Homer, grew up in Southern California and Israel. In high school he picked up photography and that piqued his interest in film. He has shot video for television and environmental stories for CNN, CBS Sunday Morning, National Geographic Society, BBC and CBC.

Lately, Zatz has been filming for Greenpeace, which hired him to document the black-head budworm in forests around Prince William Sound. Greenpeace believes the budworm, because of global warming, is poised to attack forests like the spruce beetle has.

Zatz said it's unlikely he'll make another children's film in the near future because of his change in focus.

Officials at Sky River Films, the distributor for "Alaska's Coolest Animals," said the film has sold about 3,300 copies so far.



HOMER NEWS ARTS

Thursday, July 2, 1998



Pratt Museum forest comes to life in 'Facing the Elements'

by Chris Russ
Staff Writer

Forests are magical places this time of the year, but behind the Pratt Museum it is even better.

Birds chatter and squirrels scatter in the flora while the sweet smells of cottonwood and spruce float through the air. But those who venture into the woods will discover something even more profound — an exhibit of outdoor art that offers moments of contemplation, whimsy and child-like discovery.

The annual outdoor exhibition "Facing the Elements," on display through Aug. 30, features 15 works by almost 30 artists this year. Creativity flows like lupine through collaborative and individual efforts that stretch the limit of possibility with natural and manmade elements, found and created.

Cheri Govertsen Greer and Tom Greer give hikers "The Simple Gift." Their life-size, sleek statue of a foam and wire figure playing silent notes on its flute is a remarkable sculpture that sets the tone for the rest of the show.

Unlike other works in the show, "The Simple Gift" is hard to miss. Others are liable to be passed by if not for runic markers and watchful eyes.

At the first bridge, look closely and a river of white-stone tears appears. Follow its line to a waterfall of smooth-edged glass cascading from a crying white mask with wispy blond-wire hair caught in a web between tree limbs. The untitled piece was created by Susan Phillips Cushing and Michelle La Frimere.

Pain and suffering plays into another piece that pays tribute to Sisyphus and the stone the king had to roll up a hill, only to have it always roll back down again, according to Greek mythology. Gordon

Idea" Made of fir-wood and twine, the tightly wrapped and stacked brown stems make the base for a burly tangle of sticks where smooth, white branches artfully protrude.

Some artists use moss to enhance their pieces. Lynn Naden and Brad Pruitt create a surreal work using white plaster hands — life casts — that poke through moss. "Gestures" exudes tranquility and shows a

create its perimeter and place a wreath of sticks in the middle. Within the wreath is a square of colorful stained glass that shoots off bolts of light in the late afternoon. Heads, shells and other ornaments are caught in the 4-to 5-foot diameter piece.

The exhibit has a bit of wildlife, too. A hairy, horned swamp monster rears its head and the creature's sidekick's look menacing. "Swamp Things," built from copper wire



Among works of art in "Facing the Elements" are, far left, "Time and Tide Wait for Gnomon" by Brad and Paula Dickey; left, "Gestures" by Lynn Naden and Brad Pruitt; above, "The Simple Gift" by Cheri Govertsen Greer and Tom Greer; and, below, an untitled work by Gaye Wolfe and Sam Smith.

Photos by Chris Russ,
Homer News



Terpening took two 3-foot pieces of turned, lathed wood, stood them up and placed a steel pipe across the top. A stone hangs at the center by a metal plate around the bar to complete "Sisyphus Suspended." Rusty metal and burnt wood give the piece character and a warm, weathered quality.

The installation is not without tribute to Homer's dying spruce forest. Farther down the path, patrons come to "Barbaric Necklace," a large wreath of spruce cones wrapped around the trunk of a dying tree. The piece was the work of John and Piaa Moww, Kim Terpening and Candice Maryott.

It is among the few pieces that are almost entirely produced out of elements from the forest and surrounding area. Another is Barbara Wyatt's "Three

graceful interrelationship between humanity and the environment.

Cautious footsteps are a must, especially where Luna Robbins' "Peace Circle" rests. Flat stones are arranged in a circle with lines of rocks that intersect at the center, which is marked by bear's bread.

Similarly, Traveler Terpening and Carla Klinker use stones to convey their artistic expressions in "Sacred Spiral Rocks." They place 1-foot tall, thin stones in a spiral that has a single, towering rock at its center. A fan of driftwood bound by colorful fabric casts morning shadow onto the piece.

A wooden mask and feathers are the elements Gaye Wolfe and Sam Smith use in their untitled sculpture. From a trio of trees they suspend the feather-crowned mask and a host of feathers dangle from strips of leather. The geometric shapes and lines of colored string running from the trees play tricks into the piece.

Suspension is a theme in "The Elements" by Jan Neebham. "Facing the Elements" this year, by Zak, Cody and Whitney Cushing.

A stunning sundial built by Brad and Paula Dickey catches the eye on a sunny day. It sits in the meadow near the outdoor stage. In "Time and Tide Wait for Gnomon," the Dickeyes make segments of white rocks and brown stones and place a ring of coal at the perimeter of the circle. Rusty nails form the dial's numbers.

Among the other pieces in "Facing the Elements" are "RE Growth," made of wood and CDs, by Michael Armstrong and Jennifer Simoyek; "Untitled," a sculpture of found objects by Allison Teague and Susan Becker; and a string and stirring-stick machine called "An Expresso Trip from Lead" by Jan Neebham.

Since these works are at the mercy of the elements, they are subject to change. "Facing the Elements" represents a collection of the established artists who should be able to walk in the woods and find their experience.



State expands study of Kenai River erosion

The Associated Press

KENAI — Riverfront property owners might find strangers knocking on their doors or unexpected survey markers on their land this summer as the Alaska Department of Fish and Game expands its studies of erosion along the Kenai River and does some work on private land.

Results of the study could have major implications for future management of the world-class salmon stream and its sport fishery.

"In the past we have always had 100 percent cooperation knocking on doors," said Mary King, the fisheries biologist leading the study team.

Expanding the project has made it more difficult for the team to contact owners. Last

year they worked at a dozen sites, studied plat maps and contacted people in advance.

This year, the biologists are marking points every half-mile along both banks from Skilak Lake to the tidal area at about River Mile 5.

The team will knock on doors this year but may not always see a house or find anyone home, so King said she wants area residents to know what is happening.

The study is trying to determine how much anglers affect the health of the river-bank habitat, which is crucial for salmon fry.

Biologists this year are counting anglers, measuring bank erosion and comparing plant and soil conditions before and after the peak sport-fishing season.

The Valdez Vanguard
July 8, 1998

valde z vanguard
july 8, 1998

New environmental station opens for operation at baler

The ribbon has been cut and the new Environmental Operations Station at the city's baler facility is now open. The station was funded through the Exxon Valdez Oil Spill Trustee Council, which also funded the state-of-the-art facilities in Chenega Bay, Tatitlek, Cordova and Whittier.

The station recycles oil, bilge water, household hazardous waste and oil filters. The construction of the station was sponsored by the state Dept. of Environmental Conservation and Prince William Sound Economic Development Council acted as the project manager for all the facilities.

Traveling exhibit chronicles Exxon Valdez oil spill

The traveling exhibition, *Darkened Waters: Profile of an Oil Spill*, is open through Sept. 13 at the University of Alaska Fairbanks' Seward Marine Science Education Center.

Homer's Pratt Museum produced the award-winning exhibit in 1990, chronicling the 1989 grounding of the Exxon Valdez oil tanker and the cleanup efforts of America's worst oil spill.

According to Carol Harding, director of exhibitions at Pratt Museum, the traveling exhibit has visited 16 venues since 1991, including the Smithsonian in Washington, D.C., and Burke Museum of Natural History in Seattle. To date, more than 1 million people have seen it, she said.

Occupying 1,500 square of floor space, the exhibit features 96 pho-

tographs, along with graphics, objects from the spill and interactive components. The works of photographers Tony Dawson, Natalie Forbes and Ken Graham are part of the exhibit.

Coming from a town directly involved in the spill, the exhibit also looks at the impact of the spill on people's lives, Harding said. It focuses on the continuing problem of oil spills and oil transportation worldwide by asking: Can people make a difference?

Harding said the exhibit is periodically updated in order to remain relevant. The exhibit this summer will include new information on the state of restoration and recovery, the status of spill area communities, as well as changes in spill prevention and response capability.

According to the museum direc-

tor, updates will incorporate input from the Exxon Valdez Oil Spill Trustee Council, Chugachmiut, Prince William Sound Science Center, spill area communities, regional citizens' advisory councils, environmental groups, the oil industry and other sources.

Support for bringing the exhibition to Seward was received from the Alaska Conservation Foundation, UAF School of Fisheries and Ocean Sciences and the Oil Spill Recovery Institute.

Admission is \$3 for adults, \$1 for children and \$9 for families.

The Seward Marine Center is half a block west of the Alaska SeaLife Center, which received \$39 million in Exxon criminal and civil settlement monies before opening in May. The SeaLife Center is also the venue of another display about the oil spill.

"Prevention and Response" is the theme of the Prince William Sound Regional Citizens' Council display, which is part of a larger exhibit, "Legacy of an Oil Spill — 10 Years After the Exxon Valdez,"

mounted by the Exxon Valdez Oil Spill Trustee Council.

According to an article in *The Observer*, published by the Prince William Sound RCAC, the display at the SeaLife Center discusses improvements to oil spill prevention and response capabilities since 1989. The exhibit also features photos of tankers passing through Prince William Sound, a fishing boat deploying a protective boom during a drill on Esther Island, and a computerized navigation chart on a tanker escort vessel.

ROBERT D. SMITH, Editor, July 3, 1998

Alaska Coastal Currents

By Jody Seitz



Kodiak Daily Mirror
July 3, 1998

Basic science yields practical information

Ever since the 1989 Exxon Valdez oil spill, one of the most extensive marine science programs in the world has been underway in Prince William Sound, lower Cook Inlet and the northern Gulf of Alaska.

The Exxon Valdez Oil Spill Trustee Council has been able to provide many millions of dollars each year to better understand the marine environment in the spill region. About \$14 million is being dedicated this fiscal year to research and restoration activities.

Guiding all this is an independent team of scientists from throughout the United States who review research projects, including methods, goals and results, and provide overall direction to the Trustee Council's research and monitoring efforts.

"The process of having a team of independent scientists who guide the overall research program is unprecedented, according to Dr. Bob Spies, chief scientist for all Trustee Council research efforts. 'This is the first time that a group of independent scientists has been able to shape a research program of this size over such a long time period in the United States,' Spies said.

Phil Mundy, principal of Fisheries and Aquatic Sciences in Oregon, provides the fisheries expertise on the review panel. He has extensive experience with fisheries management and large fisheries restoration projects in the Pacific Northwest. He currently advises Indian tribes, the National Marine Fisheries Service and the Northwest Power Planning Council on the expenditure of funds for recovery of endangered salmon runs.

Each reviewer has a particular focus. Mundy's is to make sure fish managers get useful information from the research projects. Fish managers need to understand how natural factors impact fish populations and Mundy's job is to focus the research to help provide the information and tools managers can use.

For example, scientists suspected that disease controlled herring populations for a hundred years, but no one had proof. With Council funding, scientists have conducted the research and published the first study ever of control of herring populations by disease organisms.

Research has not only produced new knowledge it's allowed implementation of known techniques such as otolith marking and genetic markers to identify hatchery and wild salmon stocks. The use of genetic markers to manage

the Russian River sport fisheries is one example Mundy gives of research leading the world in identifying salmon.

"We're now able to see Russian River late run sockeye amongst all the millions of Kenai River sockeye that come back. They can be identified during the season in a very short amount of time so that the managers can adjust the harvest of the Kenai to allow the late run sockeye into the river for the sports fishery," said Mundy.

Another research effort helped answer long-standing questions about the impact of sockeye overescapement on the lake-river systems. For the first time, researchers proved overescapement reduces salmon returns and that managers have to look at more than one year to make sense of salmon escapements.

Weathered oil toxicity studies yielded the most shocking discoveries. Levels of weathered oil as low as the state water quality standard can damage salmon eggs. Oil in the sediments of salmon streams damaged wild pink salmon eggs for five years after the oil spill.

Finally, blood chemistry studies of marine mammals, seabirds and ducks found that nine years after the oil spill they still show signs of contamination, though the health implications of the exposures are not known at this time.

Mundy estimates that our knowledge of marine science, particularly in fisheries, has advanced by more than 50 years during the last 6 years of intensive research.

Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Planted clams help supplement subsistence harvest

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing recovery within the spill region.

JODY SEITZ

A common saying in the coastal regions of Alaska is "when the tide goes out the table is set." The tide zone holds everything from clams to chitons and provides a smorgasbord for subsistence users and recreational clammers.

After the Exxon Valdez oil spill, clam digging lost its appeal for many people living in the spill-impacted areas. Harvests of shell-fish plummeted during the year of the spill and subsistence harvesting was disrupted for several years.

To help offset that loss, the Exxon Valdez Oil Spill Trustee Council funded a project to supplement subsistence harvests by creating put-and-take clam fisheries on some beaches in the spill area.

First, though, the Quetecak Hatchery in Seward had to learn how to raise littleneck clams. It was a project never before accomplished in Alaska. Using old clams and their own ingenuity, hatchery workers Carmen Young and Miranda Barrier experimented

until they were able to spawn the clams and keep the larvae alive. Neither of them had training in shellfish production. Three years later, the results are encouraging.

Clams that have been "planted" on beaches are growing twice as fast as expected.

The Quetecak tribe began its hatchery in a small building leased from the Institute for Marine Science. The tribe primarily raised oyster spat for area shellfish farmers.

Biologist Jon Agosti joined the team two years ago, bringing with him valuable experience growing another type of clam, manilus, in southeast Alaska. According to Agosti, shellfish hatcheries are more labor intensive than finfish hatcheries. The littleneck clam is also more difficult to raise than the manilus clam, especially in such high densities. "It's a lot of hands-on work," said Agosti. "Good husbandry requires a lot of bacterial management. It's easy for pathogens to wipe out a group."

The tiny larvae are fed three types of plankton in specific densities. Thirty million larvae excrete a lot of waste, so the tanks have to be drained daily. Six



Alaska
Coastal
Currents

Restoration and recovery following the Exxon Valdez oil spill

tanks of 30,000 gallons each are drained through microscopic screens. Workers capture the larvae on the screens, and monitor their condition, health and numbers. Then they are put in a fresh tank.

In 1996, they planted the first littleneck clams in beaches around Tatitlek, Chenega Bay and Port Graham. When they checked the clams last fall, they determined that the planted clams were growing faster than wild clams. But that is just in the first year, Agosti pointed out.

"To be really confident we would need to see that repeated in a few year classes," he said. "Then we could say with confidence that it's a three-to four-year crop versus our worst fears in the beginning that it might be a six- or eight-year crop," said Agosti.

This January the hatchery moved into brand new quarters in the Seward Mariculture Technical Center, owned by the Alaska Department of Fish and Game and built with funds from the Exxon criminal settlement. The subsistence project may pay off for shellfish farmers as well, said Agosti.

"We want to produce large numbers of spat for sale to the growers. This facility was built with an eye for the future when industry will be substantially larger and they'll grow additional species, not just the oysters which dominate production today."

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

Alaska Coastal Currents

By Jody Seitz



Planting clams helps restore oiled beaches

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Trails offer access to wilderness

Fewer than 90 miles of developed highway radiate out from the city of Kodiak, leading visitors, and some residents, to wonder, "where else is there to go when you've reached the end of the road?" The logical solution is to go off road, and luckily there are numerous trails leading off the road system that can take you in all directions. They create a vast network of opportunities, while offering a variety of experiences and different levels of challenge to intrepid adventurers. When used properly these trails can take people almost wherever they would like to go, with or without the road.

Very simply, a trail is a cleared path leading from one point to another. Human trails have long been accepted as an almost natural part of the landscape. In addition

to giving people access to, and avenues of transportation within, undeveloped wilderness area trails also spare the larger areas surrounding them by concentrating the majority of use to a specific ribbon of land.

Some of the most popular trails in Kodiak are close to town and offer comfortable walks that give inspiring views of coastline and sea vistas. Over the bridge on Near Island, the trails of North End Park lead walkers through forest, meadow, and coastal habitats.

On the north end of town, the trails in and around Fort Abercrombie State Historical Park combine a variety of natural habitats and views with a self-guided historical walking tour through the surviving WWII installations. These trails are generally broad and groomed, but can still provide

evening hikers or stifled city dwellers with a feeling of wilderness solitude.

Trails that offer a more challenging experience are located a bit farther out of town, but trail heads are readily accessible by car for the most part. The Termination Point trail, a five to six mile loop, begins at the end of Monashka Bay Road and crosses through thick forest, meadows, two beaches, and a historic Koniag village site.

Toward the end of Anton Larsen Bay Road, the Cascade Lake trail leads out from the road, around the headwaters of the bay, and up to the lake. Rubber boots are recommended on this five mile round trip hiking trail and it is also bear country, so make plenty of noise and be aware of your surroundings.

Virus in herring continues to baffle researchers

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing recovery within the spill region.

by JODY SEITZ

Prince William Sound herring pound fishers are paying close attention these days to research on a lethal virus. The transmission of viral hemorrhagic septicemia virus (VHSV) in herring held in closed pounds has been the subject of a multi-year study by Dr. Richard Kocan of the University of Washington. It was begun in 1995 after the herring population crashed in Prince William Sound.

In a pound fishery, several tons of herring are caught and placed in cages (pounds) to spawn on a limited amount of kelp. After they spawn they are released back to the general population. Kocan and his graduate student, Paul Hershberger, are studying whether this system causes herring to be stressed and express the virus.

Closed pound fisheries occur all along the Pacific coast. Liz Senear of Cordova has fished both open and closed pounds in Prince William Sound for years. She sees the issue as much broader than the effect of pounds on herring.

"Given the fact that the problem doesn't seem to be occurring in other locations that have similar fisheries, I don't think the fisheries are the prime cause,"

Senear said. "I think the prime question is still what's different about Prince William Sound such that we seem to be having problems and other places aren't."

Two words — infection and disease — lie at the heart of the issue. It's easy to confound the meaning of the research unless you know and mark the difference. As with other viruses, an organism can be infected with a virus and transmit that virus without being diseased.

For the infection to turn to disease, according to Kocan, the virus has to build to a point that the fish can no longer fight off the disease. For that disease to then occur at a population level, conditions have to be just right. A combination of high density population, low abundance of food and the presence of the virus could cause a population to crash, Kocan said.

Last year scientists found evidence that herring trapped in a pound had elevated levels of the virus. But, by the time the fish were released, the levels had decreased substantially and the herring were immune to the disease. The results were suspect, however, due to problems in the preservation of samples.

This year, a new technique was used. The water of the pounds was tested before and after fish were introduced into the pounds. Within 24 hours of introducing the fish, high levels of virus were found in the



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water of three of the closed pounds in the study. Virus levels increased daily in the pounds until the fish were released on the eighth day, when the concentration of virus in the water was at its highest. The virus also was found in the water within one meter outside the pounds at slack tide. Based on laboratory studies, scientists believe the levels were high enough to infect and kill herring.

Strangely, although the viral infection spread among the fish in the pounds, none of the fish were actually sick or died from VHSV disease.

So far, the primary conclusion of the study is that confinement or high density stresses herring, and stressed herring which have been exposed to the virus are prone to infection. Senear believes that seine or trawl fisheries also may stress the herring. "Fish are held in sets; they're not always pumped because they're not always high quality fish. That stresses and damages the fish."

"I don't think it's been looked at in detail at this point. It's a much harder thing to study," said Senear.

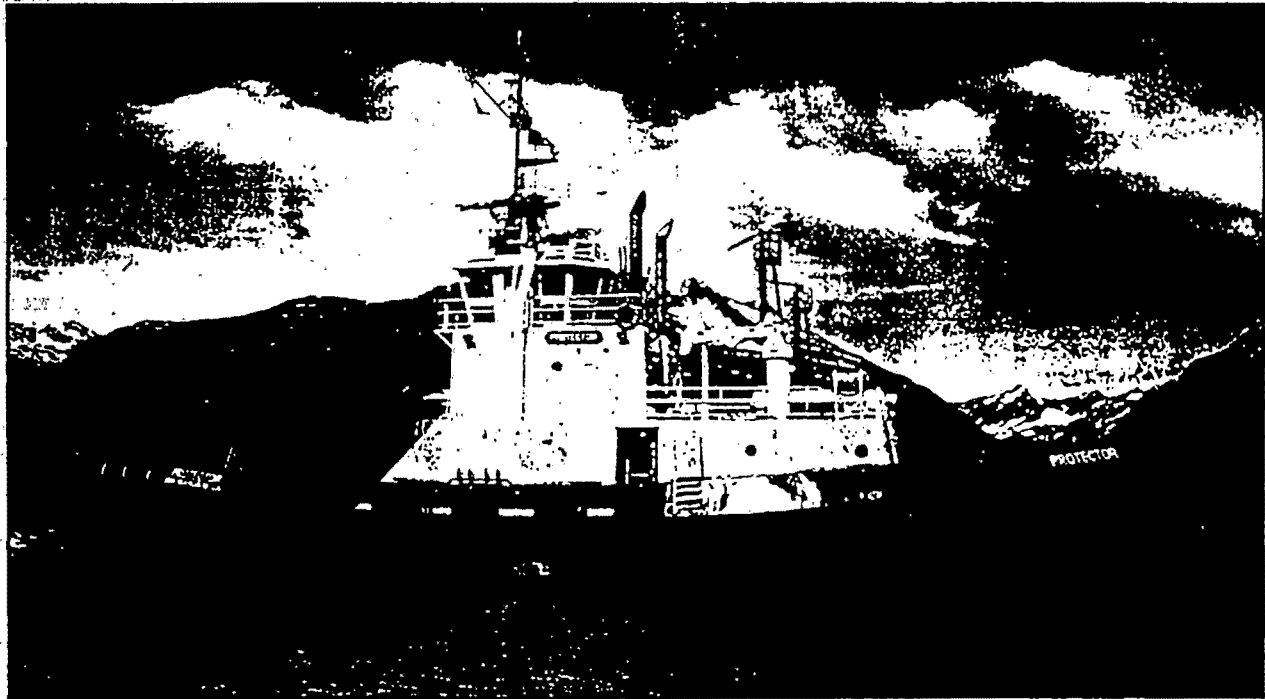
Researchers have found the virus on a purse seine that was stuck on the bottom for an hour with a load of herring, supporting Senear's theory.

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"The pound fishery is just a good model for what may be happening on a large scale when herring populations become too dense and simultaneously experience stress," said Kocan.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

Safer Sound



Photos by DAVID PREDEGER / Alyeska Pipeline Service Co.

The tractor tug Protector arrives Monday in Prince William Sound, where it will be used temporarily to escort oil-laden tankers out of Valdez. Use of the tugs is one of the safety changes occurring in the aftermath of the 1989 Exxon Valdez oil spill. Tractor tugs have tremendous ability to maneuver tankers out of trouble, if necessary. The oil industry initially resisted the suggestion that it purchase the tugs, which are more powerful — but more expensive — than the current fleet of tugs.

The industry signed on after conducting its own study. A second temporary tug is to arrive in August before two bigger tugs now under construction arrive early next year, Alyeska Pipeline Service Co. said.



SeaLife Center gets its 100,000th visitor July 12

Visitor No. 100,000 entered the doors of the SeaLife Center July 12. Visitation is running on par with earlier estimates, which predicted 100,000 visitors would enter the facility sometime the second week of July.

The Family Fun Run Saturday, Aug. 8 will help raise funds to support the marine wildlife rehabilitation program. Call the rehabilitation department, 224-6395, for details.

We need volunteers in a variety of departments. Call Jim Frederickson at 224-6343.

Membership in the SeaLife Society includes more than 1,550 people. Benefits include discounts in the gift shop and on visitor admission, free parking, a newsletter subscription and invitations to special programs. Call Larry Dalberg, 224-6313, to join.

The SeaLife Scoop



Compiled by Donna Harris

Exhibits

June 30: When accompanied by a docent or volunteer, visitors can see tufted puffins and common murrens up close in the bird aviary area.

July 1: The low tide microhabitat is complete and includes a nice-sized red rock crab (*Cancer productus*). Like all *Cancer* species, these crabs can be quite nasty, so we're not going to put anything else in there for the time being.

There is a lingcod to the harbor bottom exhibit. As expected, the searcher came over and immediately there was some territorial aggression between the two. If you see them erecting their gill covers or lining up side by side with erect dorsal fins, this is what they are doing. The searcher is maintaining territory by the rocks, while the lingcod appears to have settled in on the other side of the tank by the pilings. An important commercial and sport species, lingcod primarily eat fish, but also dine on crabs, shrimps, squid and octopus.

July 3: The exposed rock wall

microhabitat has two plumose anemones (*Metridium senile*) and one heart crab (*Phyllolithodes papillosus*). The little heart is a lithode similar to king crabs. It clings to rocks and is well camouflaged with a colorful carapace that is distinctively furrowed and ridged in a vaguely heart-shaped pattern.

In the sheltered rock walls microhabitat there is a masked greenling (*Hesagrammos octagrammus*). These bright greenlings are found fairly shallow in kelpy areas in Alaska waters more northerly than other members of their family. There is also a beautiful crinoid or feather star (*Florometra serratissima*), a blood star (*Henricia leviuscula*) and brown alga (*Alaria nana*).

The splash zone microhabitat now contains barnacles (*Balanus glandula*) and a periwinkle snail (*Littorina* sp.). Keyhole limpets (*diadora aspera*) and pink scallop (*Chlamys* sp.) have been added to the rock/sand borders microhabitat.

July 4: We opened the jelly exhibit this morning with moon jellyfish (*Aurelia aurita*) common to bays, estuaries and offshore waters.

July 6: The aquarium staff dive team went to Aialik Bay and brought back numerous invertebrates such as sea stars, sea anemones and chitons. They also found a crested sculpin, a fish found in Alaska and as far west as Korea but not in the Lower 48. It has huge fanlike fins and looks like leafy brown algae.

Rehabilitation

July 1: The female harbor seal pup from Egegik has been named Denali. When she arrived two weeks ago, she weighed 8.4 kilograms. Her weight is now 10.5 kilos. She joined Yukon, the other rehab harbor seal pup, in outdoor lab pool No. 7 today.

July 8: An abandoned sea otter pup picked up in the Klawok area is at the center. We will stabilize the very small pup before sending it elsewhere for long-term care because rehabilitated pups cannot be released to the wild. They need 24-hour, around-the-clock care for grooming and feeding needs and become imprinted to humans, and therefore must be placed in a zoo or aquarium. The Sea Life Center does not have a permanent facility for

sea otters. It is important that people not to assume an otter pup that is by itself is abandoned. The mother often leaves the pup floating on the surface when she dives to feed herself.

July 10: The two harbor seal pups are doing fine. Yukon is fully weaned onto fish and is healthy and gaining weight. Denali, the second pup, was also quickly weaned to fish. We hope to release both pups when they weigh approximately 20-25 kilos, are able to catch fish and pass a veterinary exam. They will be tagged with telemetry devices so we can monitor their progress in the wild.

July 15: Aialik, the new sea otter pup, has found a home and is being sent to Oregon Coast Aquarium today.

Research

Researchers conducted their first blood testing on the river otters the last week of June. Samples will be taken every three weeks to check on the otters' health. Several otters were examined by x-ray and ultrasound to check their limbs and

internal organs. All are in good health.

July 10: There are nine chicks hatched in the pigeon guillemot project. All are named after units of measurement: Gram, Pascal, Pico, Nano, Megabyte, Joule, Curie, Coulomb and Tesla. Another chick is piping, or breaking out of its shell. Piping usually takes two days.

Last week, George Divoky and Andrew Hovey collected eggs in the Shumagin Islands off Sand Point. The eggs are similar in size to chicken eggs and have a cream to blue background with brown speckles. From a 1970s census, the Shumagins were known to have large numbers of pigeon guillemots. In visiting the islands, Divoky and Hovey found that numbers have dropped dramatically. This week Sadie Wright is collecting eggs in the Juneau area.

Terrie Williams, a marine mammal physiologist for the University of California Santa Cruz, will arrive next week to work with Merav Ben-David on river otters, performing physiological research involving metabolic studies. She will also give a seminar on energetics.

Mammals

July 2: Tina and Pender have been in the harbor seal backholding area as we train them to "slug hop" over to the platform scale. We have also been working on voluntary morphometrics, or measurements which is something new for all of the seals.

Woody, the sea lion, has gained 130 pounds since arriving at the SeaLife Center. He weighs 630 pounds (285.5 kilos). We made a custom 96-inch ruler to get standard lengths (tip of the snout to the tip of the tail) for the sea lions. Wood is 7 feet, 6 inches (231.5 centimeters).

We introduced Kiska, one of our two female Steller sea lions, to the four older harbor seals in the outdoor lab research deck. The seals seemed fairly shy of Kiska, but gave her enough space. Kiska, on the other hand, pretty much ignored the seals.

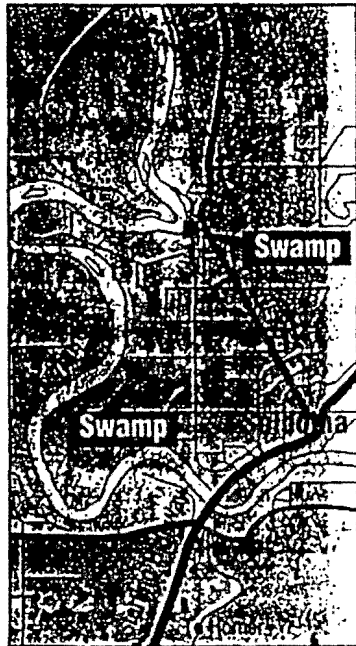
Donna Harris is marketing director at the Alaska SeaLife Center.

State makes swamps to filter run-off on way to Kenai River



ERIK HILL / Anchorage Daily News

Eric Genty of Moore's Landscaping marks locations for planting cattails, bull rushes and sedges at a sedimentation basin under construction last week near the Kenai River between Kenai and Soldotna.



RON ENGSTROM / Anchorage Daily News

By JON LITTLE

Daily News Peninsula Bureau

SOLDOTNA — Swamps, best known as breeding grounds for mosquitoes, turn out to be such effective water filters that the state has begun building little swamps of its own at storm drain outlets.

Two of these man-made wetlands were just built along the Kenai River in Soldotna, complete with native bull rushes, sedges and cattails.

"It is a functioning wetland," said Mary Leykom, a biologist with the state Department of Transportation. "We have seen shorebirds already collecting insects."

One of the new ponds was built near Big Eddy Road north of Soldotna and the other was put in at the end of Marydale Avenue. The two ponds, or sedimentation basins as they are known officially, span about 1.5 acres each. Their combined construction cost was about \$500,000.

They are catch basins, basically, at the end of gaping, 66-inch diameter pipes that funnel much of the dirty water that flows into Soldotna's storm drains.

The city of Soldotna already had baffles and oil booms built into its drainage system to trap some contamination. But where most of that partially treated water once poured directly into the river, it now spills into the pools.

Gravity does most of the cleansing by tugging road grit out of the water.

To a lesser degree, plants sprouting from the muck also comb out trace impurities like motor oil, Leykom said. Oil and grease stick to plant stems and leaves. When the plants die, fungi and bacteria feed on them and can convert some contaminants into less damaging compounds.

Last week, workers were putting the finishing touches on the new swamp at the end of Marydale Avenue. Newly planted rushes and cattails sprouted in tufts from mud manicured by heavy equipment. But in a year or so, Leykom said, these plants and others, blown in as seed, should be

Please see Page D-3, SWAMP

SWAMP: Wetlands filter water on way to Kenai River

Continued from Page D-1

growing thick.

Birds, insects and plants aren't in the firing line of heavy contamination, Leykom said. Street runoff only contains trace levels of oil to begin with. "But considering the sensitivity of the Kenai River, we're wanting to take a couple of steps to ensure cleaner water goes in there."

Building artificial wetlands isn't a new concept in the Lower 48, where some have been working well for years, said Tim Vig, project

engineer for USKH Inc., which designed the ponds.

But man-made wetlands still are uncommon in Alaska. There are two, so far, in Anchorage that function much like the new swamps in Soldotna.

The state installs these artificial wetlands when it's upgrading older roads, and next plans to build one in Anchorage when it improves the Old Seward Highway south of Dowling, she said.

Such wetlands are a good idea in cities, where pavement has replaced gravel and dirt near fish streams, said

Gary Leipitz, a state fisheries habitat biologist monitoring the Kenai River.

Paved roads and storm drains flush water straight into streams, instead of letting rainwater naturally filter through the ground, he said.

"As we progress and make things better for human use,

we're creating more of a runoff problem," he said.

Leipitz said the Marydale and Big Eddy outlets were the largest of six storm drains in the lower 47 miles of the Kenai River. "What you do is work on the worst ones first," he said, "and that's what we're doing here in Soldotna."

Oystercatchers may have returned home too soon

Editor's note: It has been eight years since the Exxon Valdez ran aground in Prince William Sound, spilling nearly 11 million gallons of Alaska crude oil. Time has since told quite a lot about the spill's long-term effects. To help tell the story, the Exxon Valdez Oil Spill Trustee Council is providing this column focusing on the ongoing recovery within the spill region.

By JODY SEITZ

Along the shores of Southcentral Alaska, the shrill cry of the black oystercatcher pulls a kayaker's gaze to rocky headlands and cobble beaches washed by the tides. The tidal area is home for the distinctive black ebird with the red eye and beak.

Oystercatchers don't migrate but defend and depend on one stretch of beach for all their needs. When they breed and build a nest, it may be on the same stretch of beach they've known their whole lives.

Nine years ago, tides of crude oil washed over the oystercatchers' homes and their larder — crabs, mussels, limpets and clams. Because they rely on inter-

tidal habitat, oystercatchers are highly vulnerable to the effects of spilled oil.

About 2,000 oystercatchers inhabit Prince William Sound, but during the summer of 1989 only about nine corpses were found. Undoubtedly, the small black birds floating in black oil were difficult to see and many carcasses were missed. But scientists think most of the birds fled.

According to Steve Murphy of the research firm ABR Inc., the general consensus is that the birds have returned, but data from studies conducted as late as 1993 suggest they may have returned too soon. Their food may still be contaminated.

For example, dense beds of blue mussels still have oil under them and in their tissues. Murphy says the main concern right now is about the lingering, sub-



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lethal effects.

"There's concern that residual oil is affecting their food supply," Murphy said. "The birds are ingesting the tainted foods and that's affecting their reproductive output. It's not lethal, but it's manifesting itself in the reproductive capacity of the birds."

Four years after the spill there were subtle differences between birds in the oiled areas and those in unoiled areas.

"The first was that egg volumes in oiled areas were less than what they were in the unoiled areas," said Murphy. "Then they noticed that a lot of nests were successful in this oiled area, but the growth rates and ultimate survival of the chicks was lower in the oiled than the unoiled zone."

This summer scientists are visiting the same beaches to check the abundance and distribution of the birds, see if the oiled areas are occupied and measure the chicks and eggs to see how they're doing.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program.

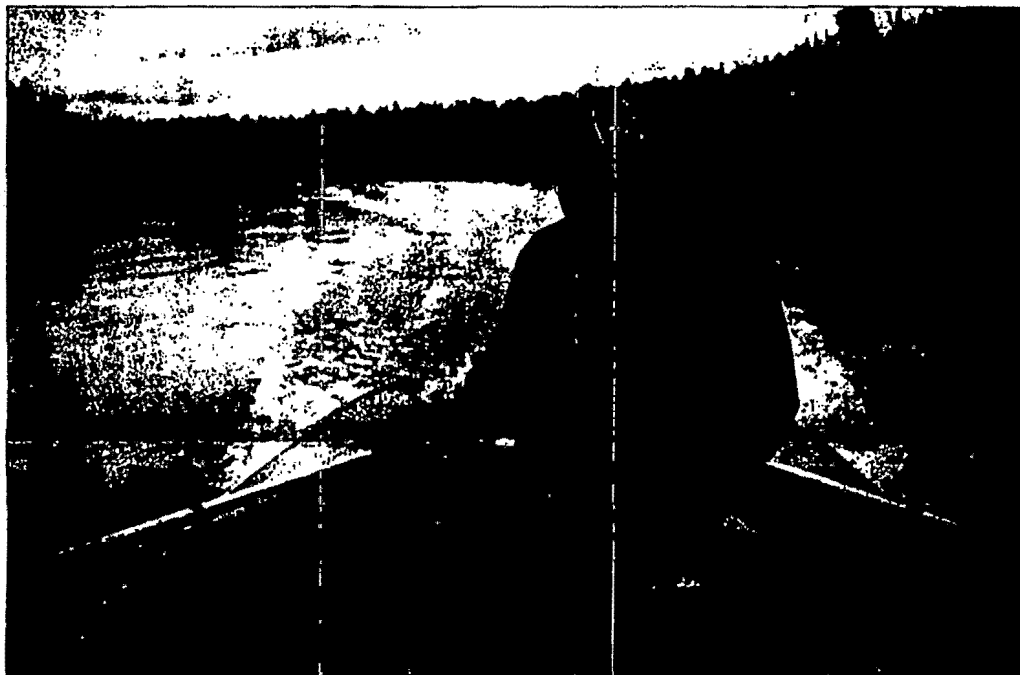


Photo by Dave Luchansky

Willard Lytle has been the campground and boat launch host at Bing's Landing in Sterling for the last nine years, commuting from Florida each summer with his wife Mildred.

Bing's Landing expands

New campsites, parking area open at Sterling campground

By CHARLES ADAMSON
Peninsula Clarion

Walking into the green forest, much of it still untouched by spruce bark beetles, you can hear the rush of the Kenai River belting through the trees. There aren't many people in this place now but when the reds get more dense and later when the silvers come, it will be wall-to-wall anglers.

Bing's Landing, just east of Sterling, has long been a famous fishing site on the Kenai, so popular that it lacked the facilities to handle the influx of people camping, fishing and parking.

"It was difficult to manage,"

said Alaska State Park Ranger Bill Berkahn.

Last Wednesday, a new wing of Bing's Landing opened to the public. It consists of 36 campsites for tents or RVs, as well as additional parking areas.

"It's a flagship campground," said Russ Counter, who hosts the new portion with his wife Linda.

Each site has a 12-by-12 foot sod tent plot, a bench, picnic table and fire pit. The sites are spaced well apart from one another to provide privacy.

"Instead of 200 sites in the same area, there's 36," said Russ.

Hosts at the parking area, formerly the camping area as well,

'We're always trying to make things just right. I think at Bing's Landing we're almost there.'

—Alaska State Park Ranger Bill Berkahn

Willard and Mildred Lytle, have been volunteering as hosts for nine years. Willard was impressed with the new tent sites.

"It's almost like being on a mattress at home," he said.

The location of the river gives Willard and Mildred an opportunity to enjoy the Kenai. Willard said he doesn't fish much until the silvers come, but he likes to drift

his boat down the river just for fun. Mildred just likes the atmosphere.

"I can sit here all day long and look at that river and never get tired of it," she said.

The campground was added on to as a result of money from the Exxon Valdez settlement. Formerly camping was allowed

See BING'S, back page

...Bing's

Continued from page A-1

in half of the parking lot at the end of the road. That led to some confusion, Berkahn said some people wanted to park in the camping sites and others wanted to camp in the parking area. Now the parking lot is designated solely for day use parking.

The boat ramp next to the parking area has been expanded to include a built up walkway area and boat cleats.

In addition to the new campsites, the trail system gradually has been expanded, giving access to all the major fishing spots. Five years ago the area was marred by multiple trails that led to the same spots and there were limited restroom and garbage facilities.

Berkahn said the goal is to get people on one common path to prevent erosion of the river bank and

surrounding forest.

The limited restrooms and garbage cans led to sanitation and litter problems. A new restroom is being added down river from the boat ramp near the popular fishing sites. It can be accessed from a stair case.

Dedicated fishing spots are marked as well as protected areas for spawning that are fenced.

"We're always trying to make things just right," said Berkahn. "I think at Bing's Landing we're almost there."

Bing's Landing is named after Bing Brown who was a fisher and guide on the Kenai River. The portion encompassing the recreation site always has been state land. In 1984, the area was transferred to State Parks for management under the Kenai River Special Management Area.

Berkahn said the project cost about \$740,000 to complete.

Camping costs \$10 per night, parking \$5 a day and boat launching \$5.

Remaining spill dollars should fund UA research

By GRANT C. BAKER

A rare opportunity exists for Alaskans to obtain several million dollars for the University of Alaska. The Exxon Valdez Oil Spill (EVOS) Trustee Council will be meeting soon to review public comment and make decisions on how to spend the \$150 million EVOS Restoration Reserve fund. The meeting is tentatively scheduled for Sept. 29.

However, the EVOS public advisory group, which is a main advisory group for the Trustee Council, will be meeting much sooner, on July 28. In order for the advisory group to consider public comment in the development of their recommendations to the Trustee Council, comments need to be submitted by July 21, this coming Tuesday.

One idea that promises many benefits for Alaskans is to use the funds to establish endowed research centers and chairs within the University of Alaska. The EVOS reserve is the last chance for creating a university endowment with the oil spill settlement money. Otherwise, the funds will very likely be spent to purchase more land for what has been called habitat protection.

About \$400 million of the total \$1 billion dollar EVOS settlement already has been spent on land. Unfortunately, tying up land for habitat protection does nothing to restore or protect habitat from oil spill damage.

Endowments allow research for restoring and protecting spill-affected areas to be performed in perpetuity. Restoring and maintaining Alaska fisheries is one area of work. Another is the development and worldwide marketing of educational courses and patents for oil spill cleanup technology. These activities can perpetually generate huge incomes and create a more self-sustaining university.

There are few things that create as much pride and confidence for a university than the knowledge it can survive on its own scholastic achievements. But, the process needs to be kick-started.

A 1997 EVOS survey asking how to spend the reserve fund resulted in 46 percent of all responses coming from outside Alaska. These were mostly from special interest organizations that favored tying up more land. However, responses from Alaskans in the spill-affected areas favored creating a permanent endowment by a ratio of 3-to-1.

In contrast, a similar 1993 EVOS sur-

vey showed that only 10 percent of all responses were from outside Alaska. So, the outside groups are now more organized and determined to exercise their power to control. If Alaskans do not speak up, the funds will be used to lock up more land and be absorbed by outside agencies including outside universities.

It seems that almost all the news about the university in recent years has been bad. Public pride and confidence in the university has been eroded by university administrators and attorneys. This is an opportunity to turn it around and restore pride and confidence.

An endowment with the EVOS reserve can be the critical key to setting the university back on the right course financially. The new university president will arrive in September. He will be in a position to take care of long needed administrative problems and he will need the help of Alaskans.

Finally, students depend upon and deserve the university fulfilling its mission to teach and learn. An endowment can go a long way to creating a self-perpetuating environment of teaching and learning.

These are the reasons the University of Alaska needs your support now.

Public comments supporting an endowment may be mailed to the EVOS Trustee Council at 645 G St., Suite 401, Anchorage, AK 99501. Or they can be e-mailed to: rebeccaw@oilspill.state.ak.us

For convenience, a simple Internet WEB site has been created to help submit a supporting comment at the address: <http://www.alaska.net/~baker/evos.htm>

The site has a link to a few examples of public comments supporting an endowment, including one from UAA Chancellor Lee Gorsuch.

This is a very rare opportunity because it is the last of the EVOS funds. Obtaining EVOS reserve funds for a university endowment can happen.

But public comments from Alaskans supporting such an endowment need to be submitted now in order for the Trustee Council to vote for it.

Dr. Grant C. Baker is a faculty member of the University of Alaska Anchorage, an alumni of the University of Alaska Fairbanks, and a Prince William Sound commercial fisherman.

Alaska Coastal Currents

By Jody Seitz



Herring virus remains mystery to scientists

Prince William Sound herring pound fishermen are paying close attention these days to research on a lethal virus. The transmission of viral hemorrhagic septicemia virus (VHSV) in herring held in closed pounds has been the subject of a multi-year study by Dr. Richard Kocan, of the University of Washington, begun in 1995 after the herring population crashed in Prince William Sound.

In a pound fishery, several tons of herring are caught and placed into cages (pounds) to spawn on a limited amount of kelp. After they spawn they are released back to the general population. Kocan and his graduate student, Paul Hershberger, is studying whether this system causes herring to be stressed and express the virus.

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"Given the fact that the problem doesn't seem to be occurring in other locations that have similar fisheries, I don't think the fisheries are the prime cause," Senear said. "I think the prime question is still what's different about Prince-William Sound such that we seem to be having problems and other places aren't."

Two words — infection and disease — lie at the heart of the issue. It's easy to confound the meaning of the research unless you know and mark the difference. Like other viruses, an organism can be infected with a virus and transmit that virus without being diseased.

For the infection to turn to disease, according to Kocan, the virus has to build to a point that the fish can no longer fight off the disease. For that disease to then occur at a population level, conditions have to be just right. A combination of high density population, low abundance of food, and the presence of the virus could cause a population to crash, Kocan said.

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released the levels had decreased substantially and the herring were immune to the disease. The results were suspect, however, due to problems in the preservation of samples.

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Strangely, although the viral infection spread among the fish in the pounds, none of the fish were actually sick or died from VHS disease.

So far, the primary conclusion of the study is that confinement or high density stresses herring, and stressed herring which have been exposed to the virus are prone to infection. Senear believes that seine or trawl fisheries also may stress the herring. "Fish are held in sets; they're not always pumped because they're not always high quality fish. That stresses the fish and damages the fish. I don't think it's been looked at in detail at this point. It's a much harder thing to study," said Senear.

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Jody Seitz lives in Cordova and also produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.



Roger Kane/LOG photo

Jack Hanna, the star of the syndicated television show "Jack Hanna's Animal Adventures," spent a day and a half at the SeaLife Center last week, taping the facility, conversations with staff and the center's rehabilitation efforts for an upcoming special on Alaska wildlife.

Sea otter pup steals the show

By Roger Kane
LOG Staff

Jack Hanna, the star of the syndicated television show "Jack Hanna's Animal Adventures," was at the Alaska SeaLife Center July 15 gathering footage for an upcoming TV broadcast, but Aialik, a 2-week-old sea otter pup, stole the show.

"If I had a big enough pocket, I'd take him home with me," Hanna said.

But because his cargo pants' pockets could not accommodate the cute little critter and because there's no ocean in Montana, Hanna said the animal would be better off left here.

However, Aialik left the SeaLife Center later that day, bound for the Oregon Coast Aquarium, where he can get the full-time attention he needs.

Sea otter pups require almost round-the-clock care to satisfy their grooming and feeding needs and in the absence of their mother, SeaLife Center staffers stepped in to temporarily care for Aialik.

But all the human contact

Hanna ...

From Page 1

Aialik receives will make it almost impossible for him to survive in the wild, as humans cannot teach otters their natural skills.

Hanna's video crew filmed him interacting with Wendy James, the SeaLife Center's rehabilitation coordinator, as she bottle-fed and groomed the pup.

The crew spent a day and a half at the facility and met with a number of the center's key people.

One segment of the show was taped with veterinarian Pam Tuomi, who assisted with wildlife rehabilitation during the Exxon-Valdez oil spill and is now working at the SeaLife Center.

Hanna and his entourage also took a boat tour of Resurrection Bay and plan to visit the Pribilof Islands, Katmai National Preserve and Big Game Alaska in Portage.

No air date has been set for the show, Larry Elliston, a producer with Spectrum Productions in Tampa, Fla., said.

See Hanna, Page 15

Researchers find link between freshwater, sea-run cutthroat trout

By Jody Seitz

Valdez Vanguard

Cutthroat trout surviving in the streams and lakes of the Prince William Sound region are the northern-most members of this species. As with other species at the limit of their range, these trout are likely to be more sensitive to changes in their environment, whether from natural or human activity.

After the Exxon Valdez ran aground nine years ago, spilled oil eventually coated beaches at the mouths of trout streams throughout the western sound. The Alaska Department of Fish and Game determined that the oil might have caused injuries to both Dolly Varden and cutthroat trout.

The Exxon Valdez Oil Spill Trustee Council was interested in developing a recovery program for the fish, but first researchers needed to learn more about the trout. Two forms of cutthroat trout live in the sound. Resident trout spend their entire lives in freshwater, usually in lakes at the heads of streams. Anadromous cutthroat trout spend the first two to three years of their lives in freshwater before migrating downstream to saltwater. Then they'll make several forays back and forth between the saltwater and their home streams.

In 1996, Dr. Gordon Reeves, research biologist with the U.S. Forest Service Pacific Northwest Research Station in Corvallis, Ore., began a project to find the genetic relationships between the two types of trout and the sea-run trout of neighboring streams. Until this research, no one knew the relationship between resident and anadromous trout.

While assessing injuries from the oil spill, biologists learned the locations of many trout streams. But, when this study began, biolo-

gists had to walk to stream after stream to find enough of the fish to study. They found cutthroat in streams that they weren't thought to inhabit; other streams held too few trout for any to be taken for research.

After two years, Reeves found that it was unlikely that anadromous trout from one stream would re-populate the streams polluted by oil. Sea-run cutthroats do not stray and are more genetically distinct than most other species of salmon.

"There's very little interaction among the populations as far as we can tell, from the genetic perspective," Reeves said. "The populations of cutthroat in the sound contain a high amount of rather unique information. If you look at other (salmonid) fishes, coho, sockeye or chinook, there's unique information, but it's much lower compared to the cutthroat trout."

Reeves' analysis shows recovery could occur in another, perhaps surprising, way. It turns out that freshwater-dwelling cutthroat can produce trout that run to the ocean.

"The resident parent can give rise to or produce anadromous individuals," Reeves said. "And so in some cases, where you have depressed stocks, it may be that recovery is going to come from this other life history form that provides not just resident fish, but anadromous fish."

For restoration, this largely indicates a path of caution with regard to this species. All that may be possible is to regulate the harvest, protect the habitat and leave the trout alone.

Jody Seitz lives in Cordova and produces the Alaska Coastal Currents radio program. The series is sponsored by the Exxon Valdez Oil Spill Trustee Council to provide information about restoration activities within the spill region.

Taking out the bumps

Bill may fund Homer road fix

By JON LITTLE

Daily News Peninsula Bureau

Homer's East End Road, a winding, bone-jarring gravel beach, could be tamed and topped with asphalt all the way out to its terminus if Congress approves \$3.9 million to pay for it.

State House Speaker Gail Phillips, R-Homer, announced Wednesday that she worked with U.S. Sen. Ted Stevens to secure funding in the Senate Transportation Appropriations Bill, which cleared the Senate appropriations Committee Tuesday. Stevens chairs the committee.

The money would pay for fixing the far end of the road, from Mile 12.5 to Mile 22. The road starts in downtown Homer and follows the northern shore of Kachemak Bay almost out to the Fox River Flats.

"I think almost every car on that road has broken windshields or broken springs," Phillips said Wednesday. "It'll have to be rebuilt and repaved."

Beyond saving money on car repairs, she said, rebuilding the road is a safety issue for an estimated 2,000 to 4,000 people who live beyond McNeil Canyon — an area that includes four villages of Russian Old Believers and a public school. For them, East End Road is the only route into town.

Sharp corners and washouts pose a threat to drivers, Phillips said. Also, given the spread of spruce-bark beetles through the surrounding forest, the region is considered a high risk for wildfires. People need to be able to evacuate quickly, she said.

Residents say the road can't be improved soon enough.

"Oh that would be wonderful," said Steve Nolan, who runs Fritz Creek General Store at Mile 8.5.

"I can't think of any place I've been on the Peninsula that has this kind of dirt road," he said. "There's just a lot of people who live on this road, and it's the only road we have. It's not like it's a secondary road. It's a main artery."

Stevens inserted \$3.9 million into the transportation bill, which is awaiting a vote on the Senate floor. The funding isn't part of the House version of the bill, so even if it passes the Senate, it will have to survive joint confer-

Please see Page B-2, ROAD

ROAD: Feds might fund Homer paving

Continued from Page B-1

ence committee hearings in late September, Phillips said.

The state just finished temporary repairs to East End Road this summer, closer to town. It repaved the first 12 and a half miles. And as part of that project, the same section is due for a total face-lift starting in the year 2000.

The \$3.9 million should cover most of the cost of rebuilding and paving the final stretch, Phillips said.

Phillips, who is up for reelection this fall, also announced on Wednesday another potential \$3.26 million in federal funding for her district.

First, there's \$2.76 million toward design and construction of the National Maritime Wildlife Center in Homer, a project that could cost up to \$30 million.

Like the improvements to East End Road, the wildlife center has been in the planning stages for years. The

'I think almost every car on that road has broken windshields or broken springs.'

— House Speaker Gail Phillips, R-Homer

goal is to build a kind of campus in Homer that would combine a marine science visitors center with offices for the Alaska Maritime National Wildlife Refuge and the Kachemak Bay National Estuarine Research Reserve.

"This is good news," said Poppy Benson, outdoor recreation planner for the National Wildlife Refuge. "Sure, we could use more money, but any forward momentum is great."

The money would come from interest generated from the Dinkum Sands settlement, so it won't cost taxpayers extra money, Phillips said.

Dinkum Sands is the name of a sometimes submerged

shoal that became central to a complex dispute over fixing the offshore boundary between state and federal lands along Alaska's oil-rich North Slope. The U.S. Supreme Court last year rejected the state's claim to the submerged lands and the federal government stands to pocket about \$1.4 billion in escrowed oil-lease proceeds from area.

Phillips also announced there is \$500,000 in the Housing and Urban Development/Veterans Administration Appropriations bill toward construction of a deep-water dock at the Homer Spit to accommodate the U.S. Coast Guard's new buoy-tending ships.

Anchorage Daily News
July 23, 1998

The Anchorage Times

Publisher: BILL J. ALLEN

"Believing in Alaskans, putting Alaska first"

Editors: DENNIS FRADLEY, PAUL JENKINS, WILLIAM J. TOBIN

The Anchorage Times Commentary in this segment of the Anchorage Daily News does not represent the views of the Daily News. It is written and published under an agreement with former owners of The Times, in the interests of preserving a diversity of viewpoints in the community.

Science, not trees

HATS OFF to the Anchorage Assembly for its strong support of a proposal to use some Exxon oil spill settlement money to create an endowment for the University of Alaska. The idea is to fund long-term marine research in Prince William Sound.

In coming weeks, the Exxon Valdez Oil Spill Trustee Council will decide how to spend the last of the billion-dollar settlement funds. Non-Alaska environmental groups are pressuring the council to buy up more land and preserve it from use and development.

The alternative proposal to fund UA scientific research would better serve Alaska.



JIM LEVAKAS / Anchorage Daily News

Clam Gulch is a razor clam-picking heaven about 35 miles south of Soldotna.

INVISIBLE ENEMY

Shellfish pickers need toxin test that works on the beach

Head 90 miles west from Juneau and you'll be pretty close to where Jim Wild has been farming oysters for five years.

Like all Alaska shellfish farmers, Wild periodically must send samples of his product to the Alaska Department of Environmental Conservation to be tested for paralytic shellfish poisoning, or PSP.

But this summer, Wild has an additional job to do at Elfin Cove Oysters. Working in conjunction with the DEC and armed with special equipment after training for three days in Palmer, Wild has volunteered to test his oysters for saxitoxin as part of a trial of a new screening test for the menacing marine poison that causes PSP.

Wild is hopeful that the new test will prove reliable. But will he use it if it passes muster?

"I'm in the position where I'm going to rely on the (present) DEC results," the oysterman says, "because he doesn't want to be liable for testing his own product."

"So why would he volunteer his time for the project if he has no intention of using the test?"

"I think it will have good value where they want to check beaches for recreational use," Wild explains.

PSP and recreational sites

Currently, there are no saxitoxin-testing programs for public beaches, and there is no way to tell if a clam, mussel, oyster or scallop is tainted.

Shellfish retain saxitoxin in their flesh for weeks to several years. Butter clams, for example, may be in an area where there has been no saxitoxin in the water for two years, but still contain deadly levels of poison.

Since 1990, 81 people have become ill with PSP in Alaska — three died. So far this year, there has been only one confirmed case, but the Alaska Division of Public Health still is investigating two other illnesses.

Kodiak Island is notorious for PSP — 35 cases have been reported in the borough since 1990. The Lake and Peninsula Borough has recorded 15 cases, and Juneau and Aleutians East have had 10 each. One case has been reported in Anchorage during that time.

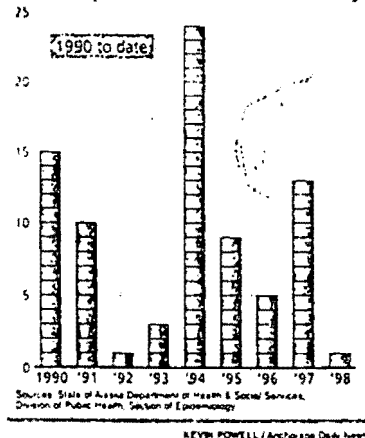
Symptoms and treatment

The effects of saxitoxin exposure depend on how much of it is in the mollusk. After eating tainted shellfish, people with PSP may experience tingling lips, nausea, vomiting, stomach cramps, or an overall feeling of

Please see Page D-8, PSP

By Suzanne Zolfo / Daily News reporter

Paralytic shellfish poisoning cases reported in Alaska annually



KEVIN POWELL / Anchorage Daily News

PSP: Test in trials shows some promise

Continued from Page D-1

weakness. Because saxitoxin "freezes" nerve cells, paralysis occurs in the worst cases. Victims are left gasping for air as their lungs languish.

There is no drug available to reverse the poisoning: Saxitoxin must pass through the body. People stricken with severe PSP can suffocate if no respirator is available to help them breathe until their muscles are released from the toxin's grip. In lieu of a respirator, emergency mouth-to-mouth breathing can mean the difference between life and death.

"This is not a toxin you want to play around with," says Dick Barrett, chief of laboratory services at the DEC in Palmer. "It's devastating."

The dream of a test

Topping the health-savvy shellfish collector's wish list is an easy-to-use, inexpensive and reliable test that can be used right on the beach to determine immediately if the mollusks are safe.

Unfortunately, the test probably won't be on the market any time soon.

Experts agree that testing for PSP may always require a representative sample of up to a dozen or more animals, depending on the harvest area. Because marine saxitoxin levels vary within a shellfish bed and within each animal, testing just one clam isn't enough.

To get a sample representative of the entire harvest area, the animals are combined, pureed and cooked down into a brown-gray slurry. The only test currently approved by the federal Food and Drug Administration — and the only one the DEC is allowed to use — involves live mice.

There are several alternative tests in development, such as the one Wild and the DEC are experimenting with that uses mouse brain cells. Another assay being developed at the University of Miami in Florida uses only the shellfish that are liquefied for testing. Still another test utilizes a radioactive labeling technique to seek out the toxin.

Barriers to predicting outbreaks

Where PSP is going to emerge next is anybody's guess, so developing a way to monitor the water where the shellfish live would be useful in predicting what beaches might be dangerous. But the origin of saxitoxin is uncertain, making monitoring for poisonous shellfish difficult.

Many researchers think the toxin is released when phytoplankton called *Alexandrium* filter water through their systems. There also is

a group of scientists, including Gerry Plumley, a PSP researcher at the University of Alaska Institute of Marine Science in Fairbanks, who believe the poison is produced by marine bacteria.

"The toxin the bacteria produce has not been proven to be saxitoxin," Plumley admits, "but it looks like it, acts like it, tastes like it — we're 95 percent sure it is saxitoxin."

Since bacteria often hole up inside *Alexandrium* cells, Plumley says it's possible the two could work in concert to create the toxin.

There also is a barrier to homing in on *Alexandrium*: Nobody knows what factors cause algae blooms. Like all plants, they need nutrients, but which nutrients is still a mystery. Barrett says *Alexandrium* blooms are not associated with water pollution.

Recreational testing dilemma

While scientists can plug away for years to find the origin of the poison, the need to quickly identify contaminated shellfish before they reach the market and dinner tables is paramount. That's where Barrett's team of testing experts comes in.

The Palmer lab can process about 40 samples a day. It's the only lab in the state where PSP tests are performed.

Anyone can send a sample to the lab for testing, but Barrett says laws mandate that commercial samples get precedence. Unfortunately, that — and the \$125 price tag — can leave recreational shellfish collectors out in the cold.

There are two things everyone can do to protect themselves.

Barrett says harvesters should heed signs warning that the shellfish are unsafe. Shellfishers should collect only in areas where there is enough commercial testing of the beds to be reasonably sure the shellfish are OK, such as in Kachemak Bay and Cook Inlet.

In the future, the price of PSP tests may come down, and perhaps using mice will be phased out, but don't expect a test you can carry to the beach and get instant results.

Are new tests the answer?

"In the majority of situations, it is the preparation of the sample that is the greatest nuisance to begin with," says Sherwood Hall, chief of the FDA's Office of Seafood in Washington, D.C.

The way Wild and the DEC collect data is the same method used in the mouse test, but Wild says the field test is easy to perform and read once the sample is prepared. He thinks it would be a good tool for local authorities to use to moni-

tor local beaches.

But Hall says merely monitoring shellfish isn't enough.

There are environmental clues that could tip people off to saxitoxin in the water, such as birds acting strangely, Hall says.

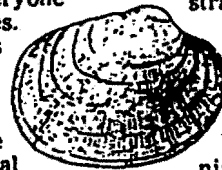
Monitoring the water for *Alexandrium* also can be useful in alerting communities to be cautious, Hall says, noting that Maine, California and Massachusetts have such programs.

Barrett doesn't think an *Alexandrium* monitoring program would be practical in Alaska with its 37,000-plus miles of coastline.

There are ways for communities to reduce the risk of PSP without a new test, says Ray RaLonde, an aquaculture specialist with the University of Alaska Marine Advisory Program in Anchorage. One way would be for communities to periodically hold open harvest days in specific areas.

People could leave their collection bags with a coordinator. He samples the whole harvest. The samples are sent to Palmer for testing, he says. If the tests are negative, people could claim their bags the next day.

As Wild says, "Any system that allows people to get a reading on their shellfish before they eat it is a good thing."



8/12/98

SPREADSHEET C
EXECUTIVE DIRECTOR'S RECOMMENDATION: FY 99 WORK PLAN
CHANGES FROM AUGUST 5, 1998 DRAFT

Pink Salmon Cluster

99190 / Linkage Map for Pink Salmon Genome	Change to FUND from FUND CONTINGENT *
99367 / Fisheries Research Synthesis & Publication	Contingent on revised DPD only; revised budget received

SEA and Related Projects Cluster

99320 / Sound Ecosystem Assessment	Change FY 00 recommendation to blank
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Other Fish Cluster

99252 / Rockfish and Walleye Pollock Genetics	Change to FUND CONTINGENT from DEFER*
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Seabird Cluster

99144A / Common Murre Population Monitoring	Add FY 00 recommendation of \$23.0
99327 / Pigeon Guillemot Restoration Research	Increase FY 99 recommendation from \$163.5 to \$166.1
99479 / Effects of Food Stress	Change to FUND from FUND CONTINGENT *

Subsistence Cluster

99127 / Tatitlek Coho Salmon Release	Contingency now includes 2 late reports (96127 & 97127)
99245 / Harbor Seal Biosampling	Change to FUND from FUND CONTINGENT; * add funding recommendation for FY 00 \$55.0, FY 01 \$40.0, FY 02 \$25.0
99263 / Port Graham Stream Enhancements	Change to DEFER from FUND CONTINGENT*

Outside Work Plan

99126 / Habitat Acquisition Support	Increase FY 99 recommendation from \$756.7 to \$770.4
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NEW FY 99 TOTALS

Work Plan:	Fund/Fund Contingent	\$ 9,928.1	(increase of \$193.0)
	Deferred	<u>\$ 1,749.7</u>	(decrease of \$190.4)
		\$11,677.8	(increase of \$2.6)
Outside Work Plan: Fund		\$17,900.7	(increase of \$13.7)

*Text of revised recommendation attached.

Projects Recommended as DEFER DECISION

The Executive Director's recommendation includes 17 DEFERRED or partially deferred projects; one would be funded outside of the Work Plan:

Proj. #	Project Title	Reason Deferred	Amount
99052B	TEK (fund \$24.7)	More information	\$21.4
99131	Clam restoration (fund \$83.4 interim)	FY 98 results	\$202.0
99263	Port Graham area stream enhancements	FY 98 results	\$42.1
99289	Black oystercatcher	FY 98 results	\$232.6
99360	Guidance for future research	Pending TC action on Reserve	\$194.4
99379	Risk to residual oil: P450	Lower priority	\$121.3
* 99391	Cook Inlet monitoring system	Pending completion of part 1	\$335.0
99393	Food webs: structure and change	Lower priority	\$125.0
99401	Spot shrimp	More information	\$70.1
99405	Port Graham hatchery (outside Work Plan; \$777.5)	More information; legal review	
99432	High cockscomb	Lower priority	\$69.3
99434	East Amatuli Island video	Lower priority	\$80.4
99444	Community harbor seal surveys	More information	\$69.2
99455	Data system: long-term monitoring	Pending TC action on Reserve	\$49.9
99459	Gulf of Alaska residual oiling	Lower priority	\$124.9
99466	Barrow's goldeneye status	Lower priority	\$12.1
99480	Black oystercatcher	FY 98 results	<u>See 99289</u>
TOTAL DEFERS			\$1,749.7

* A portion of this project's funding will be moved to the FUND category once a revised budget is received.

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
					Revised Request				
99190	Construction of a Linkage Map for the Pink Salmon Genome	F. Allendorf/Univ. Montana	ADFG	Cont'd 4th yr. 5 yr. project	\$212.1	\$212.1	\$187.3	\$0.0	\$399.4
<p><u>Project Abstract</u></p> <p>This project will complete a genetic linkage map for pink salmon in FY 98. The first primary aspect of the project in FY 99 is to add additional markers, consolidate linkage groups using gene-centromere mapping, and add additional anchor loci. The second primary aspect is to continue experiments at the Alaska SeaLife Center that use the linkage map to test for organismal effects of regions of the genome on phenotypes that affect traits that are important to recovery of pink salmon (e.g., growth and disease resistance). The project also will test whether there are regions of the genome that are affected by natural selection resulting in differential marine survival of individuals with different genotypes.</p>			<p><u>Chief Scientist's Recommendation</u></p> <p>This is a forward-looking and scientifically sophisticated project by a talented principal investigator and his team. The objective of the project is to construct a genetic linkage map for pink salmon. The project was successfully reviewed in FY 98. The emphasis in FY 99 will be on mapping traits that are of potential adaptive significance to pink salmon, such as run timing and temperature tolerance. Fund.</p>			<p><u>Executive Director's Recommendation</u></p> <p>Fund revised Detailed Project Description, which focuses on mapping traits that are of potential adaptive significance to pink salmon. This project, which is being conducted in part at the Alaska SeaLife Center, is designed to improve understanding of genetic variation in pink salmon and how such variation relates to marine survival, run timing, size, and other traits that are important from the standpoint of salmon restoration, management, and harvest. [NOTE: Funding includes \$24,800 for Alaska SeaLife Center bench fees.]</p>			

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99 Revised Request	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
99245	Community-Based Harbor Seal Management and Biological Sampling	J. Fall/ADFG, M. Riedel/Alaska Harbor Seal Commission	ADFG	New 1st yr. 4 yr. project	\$70.7	\$70.7	\$55.0	\$40.0	\$190.7
<div> <div> <u>Project Abstract</u> <p>This project will continue the harbor seal biological sample collection program begun under Project /244. The program was initiated in FY 96 and expanded in FY 97 in Prince William Sound, lower Cook Inlet, and Kodiak Island. FY 98 was scheduled to be Project /244's close-out year. Under the biosampling program, village-based technicians are selected by the Alaska Native Harbor Seal Commission and trained by the Alaska Department of Fish and Game to collect samples. The samples are transported to Anchorage or Kodiak for further sampling and distribution to participating scientists for analysis. Under Project 99245, the Alaska Native Harbor Seal Commission will also organize a two-day workshop, and produce and distribute a newsletter with summaries of the biological sampling program.</p> </div> <div> <u>Chief Scientist's Recommendation</u> <p>This project has been a highly successful effort to obtain harbor seal tissue samples through the efforts of subsistence hunters, with participation by students in the Youth Area Watch. The samples obtained have been useful to harbor seal researchers. In addition, the educational work and the involvement and active cooperation with community residents will undoubtedly benefit harbor seals over the long term. The draft final report on the pilot project (/244) indicates there has been progress with respect to management of the growing tissue database. There has been less progress in development of a long-range funding plan. My recommendation is to fully fund this project in FY 99 and to phase out funding over a two-to-three year period.</p> </div> <div> <u>Executive Director's Recommendation</u> <p>Fund full request in FY 99. Funding will be reduced in subsequent years to reflect transition of the project to other funding sources. This project will enable the Alaska Native Harbor Seal Commission to continue its biological sample collection program for harbor seal in Prince William Sound, lower Cook Inlet, and the Kodiak area. These samples are provided to ongoing EVOS projects which seek to explain why harbor seals are not recovering.</p> </div> </div>									

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

OF RECOMMENDATION BY EXECUTIVE DIRECTOR'S RECOMMENDATION FY99-02									
Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99 Revised Request	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
99252	Investigations of Genetically Important Conservation Units of Rockfish and Walleye Pollock	J. Seeb, L. Seeb/ADFG	ADFG	Cont'd 2nd yr. 5 yr. project	\$232.5	\$232.5			\$232.5
	<u>Project Abstract</u> This project will consolidate an array of requests from the commercial fisheries industry for discrete stock research into a single proposal for work that the Alaska Department of Fish and Game will conduct at its Anchorage genetics laboratory. Also, the Alaska Department of Fish and Game proposes to develop experimental fish runs at the Alaska SeaLife Center; these are essential for study of genetics, physiology, or diseases of anadromous fish proposed by University of Montana, University of Alaska, or the Alaska Department of Fish and Game and other principal investigators seeking to conduct research at the Seward facility.	<u>Chief Scientist's Recommendation</u> This project was funded in FY 98 recognizing that measures of possible genetic differences within fish stocks are an important starting point for a better understanding of population genetics and, eventually, how to best manage the fishery to protect genetic diversity. Although preliminary work is underway on rockfish and pollock, the proposal for FY 99 work needs to be strengthened. It is recommended that the project be funded contingent on receipt of a revised proposal that is favorably reviewed. The revised proposal should address (1) the relationship among any genetically important "units" and the production and health of the population in the Gulf of Alaska, (2) more interpretation of the recent and expanding literature on microsatellites and population structure in fishes relative to the goals and methods for this proejct, (3) elaboration of reasonable and testable hypotheses, (4) <u>specifically</u> how the results of this study might be incorporated into better management of these species, and (5) other reviewer comments as will be outlined in a letter to follow.	<u>Executive Director's Recommendation</u> Fund contingent on submittal and approval of a revised Detailed Project Description that addresses the Chief Scientist's concerns. This project is just getting underway in FY 98 at the Alaska SeaLife Center, and it will explore genetic stock structures of rockfish and pollock in the Gulf of Alaska. Rockfish were injured by the oil spill, and a pollock fishery has developed in Prince William Sound to replace other lost fishing opportunities. [NOTE: Funding includes \$32,500 for Alaska SeaLife Center bench fees.]						

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99 Revised Request	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
99263	Assessment, Protection and Enhancement of Salmon Streams in Lower Cook Inlet	W. Meganack, Jr./Port Graham Corporation	ADFG	Cont'd 3rd yr. 4 yr. project	\$42.1	\$42.1	\$23.5	\$0.0	\$65.6
<u>Project Abstract</u> This project will replace lost subsistence services by constructing enhancement projects on two of the major salmon streams in the lower Cook Inlet spill area. Port Graham Corporation management, with advice from an Alaska Department of Fish and Game fisheries specialist, will supervise the project and coordinate with a professional fisheries scientist and resource consultants. Local subsistence users will be employed as technical assistants during the field survey and during construction of the habitat improvement structures. In FY 98, two projects are being implemented: construction of a fish pass on the Port Graham River and a rearing pond on Windy Creek Left. In FY 99, the success of these two projects will be monitored and vegetation will be planted around the rearing ponds.		<u>Chief Scientist's Recommendation</u> This project's objective depends on successful completion of permitting, design, and construction in FY 98. If it meets its FY 98 objectives, it is appropriate to monitor results. However, no new instream construction and enhancement projects should be undertaken other than planting vegetation around existing nursery ponds. Defer until FY 98 work is complete.		<u>Executive Director's Recommendation</u> Defer decision pending satisfactory completion of FY 98 construction of stream improvements. If funded, funding will include new objective to plant vegetation around the rearing ponds on Windy Creek Left. The goal of this project is to protect and enhance salmon streams important to the restoration of subsistence in the Port Graham area. FY 98 funding was provided in two phases: Phase 1 (NEPA, permitting, engineering/design) is currently underway; Phase 2 (construction) will be authorized upon the completion of Phase 1.					

SPREADSHEET B: EXECUTIVE DIRECTOR'S RECOMMENDATION / FY 99 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY99	FY99 Recom.	FY00 Recom.	FY01 Recom.	Total FY99-02
					Revised Request				
99479	Effects of Food Stress on Survival and Reproductive Performance of Seabirds	J. Piatt/USGS-BRD, A. Kitaysky/Univ. of Washington	DOI	New 1st yr. 4 yr. project	\$84.7	\$84.7	\$125.2	\$129.6	\$414.5
<u>Project Abstract</u>		<u>Chief Scientist's Recommendation</u>		<u>Executive Director's Recommendation</u>					
This project will measure the rise in blood levels of stress hormones such as corticosterone in response to a standardized stressor: capture, handling and restraint. This well-known response (found throughout vertebrates from fish to mammals) provides a strong assessment of whether or not a free-living population is chronically stressed or, if baseline levels of corticosterone appear normal, the stress-induced increase in corticosterone indicates potential for stress. This "field endocrinology" approach provides exact information on current stress status and the potential for stress in relation to quality and abundance of food. The project will investigate seabirds breeding in lower Cook Inlet and also use captive birds for controlled experiments.		The original proposal was not viewed as a priority for funding, but corticosterone data that became available this summer from experimental and pilot studies in lower Cook Inlet indicates that blood concentrations of corticosterone in both murre and black-legged kittiwakes can reflect food stress. It may be possible, therefore, to estimate food stress in seabird colonies in future studies of the northern Gulf of Alaska. The possible cost efficiencies over establishing long-term field camps to track food availability in nesting seabirds are potentially very significant. Fund.		Fund revised Detailed Project Description, which deletes Alaska SeaLife Center component in FY 99. This project will explore the use of corticosterone, a biochemical indicator of stress, as a tool to monitor seabird populations. This project will supplement data on food limitations being gathered in the APEX project (/163) and may lead to development of an effective and efficient monitoring technique.					

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178



MEMORANDUM

TO: Trustee Council Members

FROM: Sandra Schubert *Sandra*
Project Coordinator

THROUGH: Molly McCammon *Molly*
Executive Director

DATE: August 8, 1998

RE: Quarterly Project Status Summary -- June 30, 1998

This memorandum summarizes the status of reports for the quarter ending June 30, 1998, for all restoration projects funded by the Trustee Council during 1992, 1993, 1994, 1995, 1996, and 1997. The memorandum also includes progress updates for 1998 projects.

Attachment A summarizes the status of project reports by agency.

Attachment B lists the reports that are significantly behind schedule. Reports are on this list if (1) they have not yet been submitted to the Chief Scientist, (2) they 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, or (3) they were submitted to the Chief Scientist for peer review more than six months ago and have not yet been peer reviewed.

Attachment C summarizes activities conducted during the April-June quarter for all projects underway in FY 98.

As of June 30, 1998, a total of 234 restoration project reports had been peer reviewed and accepted by the Chief Scientist (this is up from 220 reports accepted as of March 31, 1998). Once accepted by the Chief Scientist, reports are submitted to the Alaska Resources Library and Information Services (ARLIS). As of June 30, 188 reports were available to the public through ARLIS and other libraries around the state (this is up from 182 reports available as of March 31, 1998). Please contact the Restoration Office or ARLIS if you would like a list of the reports currently available to the public.

Federal Trustees

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

State Trustees

Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

Status of 1992 Project Reports as of June 30, 1998

A total of 75 reports are being produced on projects funded in the 1992 Work Plan. These reports are considered "final" reports and are subject to peer review and approval by the Chief Scientist. (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.)

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
66	6	2	1

Status of FY 93 Project Reports as of June 30, 1998

A total of 28 final reports are being produced on projects funded in the 1993 Work Plan.

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
21	4	2	1

Status of FY 94 Project Reports as of June 30, 1998

A total of 37 final reports are being produced on projects funded in the FY 94 Work Plan.

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
33	4	0	0

Status of FY 95 Project Reports as of June 30, 1998

A total of 48 reports are being produced on projects funded in the FY 95 Work Plan. Beginning with the FY 95 project year, "annual" reports are required for continuing projects. Annual reports, although peer reviewed, are not required to be rewritten in response to peer review comments. Rather, the peer review comments are to be used to guide future work on the project.

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
39	4	5	0

Status of FY 96 Projects as of June 30, 1998

A total of 50 reports are being produced on projects funded in the FY 96 Work Plan.

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
28	16	4	2

Status of FY 97 Projects as of June 30, 1998

A total of 55 reports are being produced on projects funded in the FY 97 Work Plan.

<u>Reports Available to Public at ARLIS</u>	<u>Reports Accepted by Chief Scientist but Not Yet Available to Public</u>	<u>Reports in Progress</u>	<u>No Report Yet Submitted</u>
1	12	31	10

Status of FY 98 Projects as of June 30, 1998

A project-by-project summary of activities conducted during the April-June quarter is presented in **Attachment C**.

Status of NRDA Reports

Work continues on finalizing 23 NRDA reports that were not final at the time the settlement agreement was reached. The goal is to have these reports completed by the end of FY 98, recognizing that they are a somewhat lower priority than the reports on ongoing projects. To date, 11 of the reports are available to the public at ARLIS, 6 more are under review by the Chief Scientist or accepted by the Chief Scientist but not yet at ARLIS, and 6 are still being drafted. A complete description of tasks and expenses associated with completion of each NRDA report is available from the Restoration Office.

Conclusion

As in past years, my recommendation to you, in regard to the FY 99 work plan, is that no project funding be authorized for any PI who has an overdue report. Please let me know if you would like to discuss any of this further.

ATTACHMENT A
Summary of Project Report Status as of June 30, 1998

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 ARLIS
ADEC	2	0	0	2	2
ADFG	26	1	2	23	22
ADNR	1	0	0	1	1
DOI	33	0	0	33	30
NOAA	11	0	0	11	11
USFS	2	0	0	2	0
TOTAL	75	1	2	72	66

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 ARLIS
ADEC	2	0	1	1	1
ADFG	12	1	1	10	9
ADNR	0	0	0	0	0
DOI	9	0	0	9	7
NOAA	3	0	0	3	3
USFS	2	0	0	2	1
TOTAL	28	1	2	25	21

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 ARLIS
ADEC	1	0	0	1	1
ADFG	19	0	0	19	19
ADNR	2	0	0	2	2
DOI	6	0	0	6	4
NOAA	5	0	0	5	5
USFS	4	0	0	4	2
TOTAL	37	0	0	37	33

ATTACHMENT A
Summary of Project Report Status as of June 30, 1998

1995 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 ARLIS
ADEC	3	0	0	3	4
ADFG	24	0	3	21	20
ADNR	1	0	0	1	1
DOI	7	0	0	7	4
NOAA	8	0	1	7	7
USFS	5	0	1	4	3
TOTAL	48	0	5	43	39

1996 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 ARLIS
ADEC	1	0	1	1	0
ADFG	27	2	2	23	16
ADNR	3	0	0	3	3
DOI	4	0	0	4	2
NOAA	9	0	2	7	6
USFS	6	0	0	6	1
TOTAL	50	2	4	44	28

1997 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 ARLIS
ADEC	2	0	0	2	0
ADFG	30	8	15	7	0
ADNR	4	0	3	0	1
DOI	6	0	4	2	0
NOAA	7	1	4	2	0
USFS	6	1	5	0	0
TOTAL	55	10	31	13	1

ATTACHMENT B
Overdue Reports (as of 8/6/98)

Agency	Project Number	PI	Final or Annual	Project Title	Status of Report
ADFG	FS01	Fried, Bue	Final	Spawning area injury	Never submitted (original PI departed); new due date 10/97 -- NOT RECEIVED. <i>NOTE: 98329 not authorized pending submittal of this report</i>
ADFG	93033-1	Rothe	Final	Harlequin duck - Afognak habitat assessment/PWS production	Peer reviewed; returned to PI for revision 11/14/95; new due dates of 12/97 and 7/1/98 have passed and report still not received
ADFG	93033-2	Rothe	Final	Harlequin duck restoration	Never submitted; new due dates of 12/97 and 7/1/98 have passed and report still not received
ADFG	95060	Albert	Final	Spruce bark beetle	Peer reviewed; returned to PI for revision 12/30/97
ADFG	95086C	Highsmith, Stekoll	Final	Herring Bay	Peer reviewed; returned to PI for revision 12/12/96; new due date for Highsmith 12/15/97 -- NOT RECEIVED; new due date for Stekoll 6/15/98 -- NOT RECEIVED. <i>NOTE: 98325 was authorized with understanding that these due dates would be met (memo in file).</i>
ADFG	95279	Miraglia	Final	Food safety testing	Peer reviewed; returned to PI for revision 6/23/97
ADFG	96127	Kompkoff	Annual	Tatitlek coho release	Peer reviewed; returned to PI for revision 1/5/98
ADFG	96258A-1	Tarbox	Final	Sockeye: Kenai	Never submitted; new due date 1/1/98 (with manuscript) -- NOT RECEIVED
ADFG	96258A-2	Swanton	Final	Sockeye: Kodiak	Never submitted; new due date 10/30/97 -- NOT RECEIVED. Now expected 10/1/98.
ADFG	97127	Kompkoff	Annual	Tatitlek coho release	Never submitted; was due 4/15/98
ADFG	97191A-2	Seeb	Annual	Oil-related embryo mortality: genetics	Never submitted; was due 4/15/98
ADFG	97196	Seeb	Annual	Pink salmon genetics	Never submitted; was due 4/15/98
ADFG	97427	Rosenberg	Final	Harlequin ducks	Never submitted; due date was extended to 7/15/98
ADEC	93038	Gibeaut	Final	Shoreline assessment	Peer reviewed; returned to PI for revision 11/18/97
NOAA	95090	Babcock (?)	Final	Oiled mussel beds	Peer reviewed; returned to PI for revision 12/31/97

ATTACHMENT B
Overdue Reports (as of 8/6/98)

USFS	97302	Hodges	Final	Cutt/Dolly inventory	Never submitted; due dates of 11/30/97 and 5/30/98 have passed and report still not received
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The following reports were submitted to the Chief Scientist for peer review more than 6 months ago:

NONE

DRAFT

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98001-CLO

**Recovery of Harbor Seals From EVOS:
Condition and Health Status**

M. Castellini/UAF

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Obtain and analyze final blubber samples from ANHSC

DONE-PhD defense by Brian Fadely: "Investigations of Health Status and Body Condition of Harbor Seals in the Gulf of Alaska"

Jan-Mar

DONE-Final statistical analysis of health data

April-June

DONE-Submit final report

-Submit journal articles

July-Sept

-Archive data

Publications:

- 1) Plasma chemistry and hematology ranges of GOA harbor seals. Canadian Jnl. Zoology
- 2) Effects of body shape and blubber distribution. Physiological Zoology
- 3) Compositional analysis of harbor seal blubber. Comparative Biochemistry and Physiology

98007A

Archaeological Index Site Monitoring

D. Reger/ADNR

ADNR

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE -Prepare draft report for 97007A

Jan-March

-

April-June

DONE-Submit annual report (97007A)

UNDERWAY-Finalize arrangements for field work

July-Sept

-Conduct fieldwork

-Submit charcoal and sediment samples for analysis

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98012A-BAA

**Comprehensive Killer Whale
Investigation in Prince William Sound**

**C. Matkin/North Gulf Oceanic
Society**

NOAA

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Transport FY 97 samples to genetic and contaminant labs

Jan - March

DONE-Submit annual report (Jan. 5)

UNABLE TO ATTEND-Present paper (patterns in contaminant levels in PWS killer whales) at Biennial Society of Marine Mammalogy Conference in Monaco (Matkin)

MATKIN ATTENDED-Annual Workshop poster presentation (Scheel)

UNDERWAY-Microsatellite analysis of nuclear DNA and mtDNA of new samples

UNDERWAY-Contaminant analysis of new samples

April-June

UNDERWAY-Analyze winter recordings from remote hydrophone

UNDERWAY-Pedigree analysis of microsatellite DNA data

UNABLE TO ATTEND-Present paper (GIS aspects of killer whale project) at Conservation Biology Society annual meeting (Scheel)

July-Sept

-Field work: monitoring and biopsies

-Allele frequency analysis of microsatellite DNA

-Complete critical habitat interpretive map and report

-Set up remote hydrophone operation for winter 1998/99

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators (NVP)	L. Holland-Bartels, et al/USGS	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Harlequin: Survival monitoring and skiff surveys

DONE-Sea Otter: Aerial survey of western PWS

DONE-All: Post-field season project meeting

Jan-March

DONE-All: Project review; Annual Workshop presentation

UNDERWAY-Harlequin: Survival monitoring and skiff surveys

April-June

DONE-Submit annual report (97025)

DONE-River Otter: Live trapping for morphometrics and tissue sampling

CARCASS SURVEY COMPLETE-Sea Otter: Beach-cast carcass survey; time-depth recorder implantation

BEING DONE IN COOPERATION WITH APEX PROJECT (/163) -Pigeon Guillemot: Active nest surveys, blood sampling, prey sampling, and nest monitoring

July-Sept

-Sea Otter: Aerial survey of PWS; capture for morphometrics and tissue collection; boat-based survey of reproduction

-Harlequin: Vessel charter for harlequin duck capture

-Invertebrates: Vessel charter to sample study areas

-River Otter: Locate, sample, monitor latrine sites

-Pigeon Guillemot: Active nest surveys, blood sampling, prey sampling, and nest monitoring

Conferences

American Ornithologists Union (Bishop)

Mechanism of Toxicology Professional Meeting (Duffy)

DONE 1/98-Int'l Marine Mammal Symposium (VanBlaricom and Bodkin)

DONE 12/97-Int'l Otter Symposium (VanBlaricom)

Wildlife Society (Bowyer)

Publications

-Harlequin:

(1) SUBMITTED TO J. FIELD ORNITHOLOGY-Loss of abdominally-implanted radio transmitters equipped with percutaneous antennas

(2) SUBMITTED TO J. FIELD ORNITHOLOGY-Evaluation of bursal depth as indicator of age class

(3) SUBMITTED TO JOURNAL OF ZOOLOGY AND WILDLIFE MEDICINE-Intraoperative and immediate post-release mortality of harlequins implanted with abdominal radio transmitters, (4) SUBMITTED TO AUK-Estimating body lipid and lean mass of females during wing molt

(5) UNDERWAY-Genetic differentiation among populations

(6) UNDERWAY-Range-wide characterization of population genetic structure

-River Otter:

(1) TITLE ACCEPTED BY ECOLOGY: Social behavior and ecosystem processes: effects of river otter latrine sites on nutrient dynamics of terrestrial vegetation

(2) TITLE ACCEPTED BY WILDLIFE SOCIETY BULLETIN: Capturing river otters: a comparison of Hancock and leg-hold traps

-O'Clair:

(1) Comparison of growth parameters in *Mytilus trossulus* from age-length and tagging data

(2) Mortality and growth of *Mytilus trossulus* with tidal height, slope, and substrate class

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98043B	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures	D. Gillikin/USFS	USFS
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Project Tasks to be Completed this Quarter:

Oct-Dec

-

Jan-March

DONE-Attend Annual Workshop

April-June

DONE-Submit annual report

July-Sept

-Measure effects of installed structures

-Conduct population estimates of primary units

98052A	Community Involvement	P. Brown- Schwalenberg/CRRC	ADFG
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Project Tasks to be Completed this Quarter:

Each two weeks: Coordinator fax update to Community Facilitators

Each month: Community Facilitators submit monthly report to Coordinator

Oct-Dec

DONE-Renew contract between ADFG and CRRC

DONE-Renew subcontracts between CRRC and communities

DONE-Training workshop/orientation for Community Facilitators

DONE-Community Facilitators update local resource inventories

UNDERWAY-Coordinator compile local resource inventories for distribution to Pls

Jan-Mar

DONE-Coordinator coordinate participation of Community Facilitators in Annual Workshop

DONE-Coordinator coordinate provision of technical assistance to villages by EVOS and agency staff to develop project proposals

April-June

DONE-Coordinator review community involvement component of FY 99 proposals; make recommendations to Executive Director and inform Community Facilitators of proposals that would involve their communities

ALSO IN MAY, HELD RETREAT FOR COMMUNITY FACILITATORS

July-Sept

-

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98052B

Traditional Ecological Knowledge

P. Brown- Schwalenberg/CRRRC

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Renew contract between ADFG and CRRRC

DONE-Renew subcontract between CRRRC and TEK Specialist

DONE-Initiate contact with FY 98 PIs with TEK components in their projects

ALSO: Produced draft of TEK database reference guide

Produced draft of TEK handbook

Contracted with specialist to conduct community training workshops

Jan-March

1 DONE-Complete 3 community training workshops (Oct-March)

DONE-Attend Annual Workshop; make contacts with PIs about including TEK in their FY 99 proposals

April-June

DONE-Review FY 98 proposals and make recommendations to Executive Director regarding TEK

COMPLETED TWO-Complete 5 synthesis workshops (Nov-April)

UNDERWAY-Prepare draft synthesis workshop reports

UNDERWAY-Prepare draft training workshop reports

July-Sept.

-Prepare final synthesis workshop reports

-Prepare final training workshop reports

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98064

**Monitoring, Habitat Use, and Trophic
Interactions of Harbor Seals in Prince
William Sound**

K. Frost/ADFG

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Analyze FY 97 aerial survey data

NOT DONE, BY REQUEST OF ANHSC (SENT UPDATE INSTEAD)-Meet with hunter representatives at Alaska Native Harbor Seal Commission meeting

UNDERWAY-Analyze SDR tag data

UNDERWAY-Analyze fish distribution/seal diving

WILL BE WORKED ON IN JAN.-MAR. QUARTER WHEN PROGRAMMER AVAILABLE-Finish "user friendly" population model

DONE-Distribute Harbor Seal Update

ALSO: Participate in harbor seal technical review with Chief Scientist

Jan-March

DONE-Attend Annual Workshop

DONE-Arrange logistics

DONE-Analyze FY 97 seal/prey fatty acid samples

UNDERWAY-Begin fatty acids model development

April-June

DONE-Submit annual report (97064)

July-Sept

DONE (N=57)-Sample seals in PWS

DONE (N=8)-Satellite tag seals in PWS

-Bayesian reanalysis of survey data

-Conduct aerial surveys in PWS during molting

-Distribute Harbor Seal Update

-Retrieve Argos SDR data

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98076	Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon	A. Wertheimer/NOAA	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Complete stream surveys and weir sampling

DONE-Evaluate gamete survival to eyed stage

DONE-Analyze data on return rates and characteristics, straying and reproductive viability

Jan-March

DONE-Present preliminary analysis at Annual Workshop

April-June

DONE-Evaluate gamete survival to emergent fry stage

July-Sept

-Submit final report (Sept.)

Conferences

DONE-American Fisheries Society annual meeting (Wertheimer, Heintz, Thedinga)

Publications

- 1) Homing and straying of pink salmon exposed to oiled gravel during embryonic development (Wertheimer)
- 2) Effects of incubation in oiled substrate on the return rate, size, and migration timing of pink salmon (Wertheimer)
- 3) Effects of coded-wire tagging and transplant on the homing and straying behavior of two stocks of pink salmon (Thedinga)
- 4) Effects of incubation in oiled substrate on the reproductive viability of pink salmon (Heintz)
- 5) Heritability of reproductive damage in pink salmon caused by incubation in oiled substrate (Heintz)
- 6) Comparison of Peterson and Schaefer mark/recapture approaches for assessing pink salmon escapements (Maselko)

98100	Administration, Science Management, and Public Information	All Trustee Council Agencies	ALL
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Project Tasks to be Completed this Quarter:

One component of Project 98100 is OSPIC/ARLIS. During the quarter ending June 30, 1998, ARLIS staff received 4,339 visitors and 1,040 incoming calls; responded to 2,472 requests for in-depth information, 227 of which were EVOS questions (routine requests for EVOS documents are now handled by the Restoration Office), processed 1,433 interlibrary loans (187 for EVOS materials), and sold 1 marine ecosystem poster. ARLIS staff approved and distributed 2 final reports and 14 annual reports, and updated the Bibliography of Trustee Council Funded Research, which now includes 221 citations. ARLIS staff began work with the Restoration Office and agency liaisons to create a uniform OEO/ADA compliance statement for project reports. ARLIS staff obtained 117 books and articles for EVOS peer reviewers in a project requiring 72 staff hours. ARLIS staff completed the administrative and public records for the EIS and RPWG materials – 25 boxes of documents were reviewed, copied, indexed, and filed in a total of 567 staff hours. ARLIS staff inventoried the small parcel appraisals and began work to complete the Trustee Council Administrative Record appraisal collection. The OSPIC web page is still active and this past quarter 19,177 people used this page.

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98126	Habitat Protection and Acquisition Support	C. Fries/ADNR, D. Gibbons/USFS, G. Elison/DOI	ADNR
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Project Tasks to be Completed this Quarter:

Project tasks completed 10/1/97-12/31/97

-Negotiations continue with Afognak Joint Venture, Eyak, and Tatitlek

-English Bay acquisition closed at the end of October

-Trustee Council agreed to purchase the following parcels following agreement from landowners: Homer Spit, Karluk, Ayakulik, and Baycrest

-Discussions continue with the owners of PWS 05 and 06

Project tasks completed 1/1/98-3/31/98

-Tatitlek expected to close in June

-AJV agreement has been reached

-Eyak is proceeding

Project tasks completed 4/1/98-6/30/98

-1st Tatitlek closing completed

98127	Tatitlek Coho Salmon Release	Tatitlek IRA Council	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Take coho eggs and incubate at VFDA hatchery

UNDERWAY-Rear coho fingerlings at VFDA hatchery

Jan-March

DONE-Clean/mend net pen web; prepare anchors and buoys

April-June UPDATE NOT RECEIVED

DONE-Renew agreement with Valdez Fisheries Development Corp.

-Transport smolt to Boulder Bay and place in net pens (May 20-25)

-Release smolt into Boulder Bay (June 3-8)

July-Sept

-Egg take (August)

98131	Chugach Native Region Clam Restoration	P. Brown- Schwalenberg/ CRRG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Develop techniques to mature and spawn littleneck broodstock

DONE-Develop techniques for producing 5 mm littleneck seed in hatchery

Jan-Mar

DONE-Move into new facility

April-June

DONE-Submit annual report (97131)

DONE-Transfer 5 mm seed to hatchery pre-nursery and FLUPSY

-Develop techniques for producing 10-15mm seed for growout

July-Sept

-Initiate process for incorporating predator control

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

**98139A1-CLO Salmon Instream Habitat and Stock
Restoration - Little Waterfall Barrier
Bypass Improvement**

S. Honnold/ADFG

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Data analysis

Jan-March

UNABLE TO ATTEND-Attend Annual Restoration Workshop

April 15

EXTENSION TO 9/30/98-Submit final report

**98139A2 Port Dick Creek Tributary Restoration
and Development**

W. Bucher/ADFG

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Analyze collected data and continue work on annual report

DONE-Travel to project site to inspect instruments

Jan-March

DONE-Prepare field equipment; arrange logistics

April-June

DONE-Submit annual report (April 15)

DONE-Estimate spawning success through enumeration of fry emergence from the primary tributary

DONE-Estimate spawning success through enumeration of fry emergence from the secondary tributary

UNDERWAY-Perform stream stability and hydrologic field work

July-Sept

-Conduct ground surveys to estimate colonization and potential spawning deposition

-Evaluate fry survival data from springtime emigration

-Perform stream stability and hydrologic field work

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98142-BAA	Status and Ecology of Kittlitz's Murrelets in Prince William Sound	B. Day/ABR, Inc.	NOAA
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Project Tasks to be Completed this Quarter:
Oct-Dec

Jan-March

DONE-Arrange logistics

DONE-Complete data analysis and report

ALSO digitized locations of Kittlitz's murrelets that were mapped during surveys and digitized other physical features in the study bays

April-June

DONE-Early summer cruise

July-Sept

-Mid-summer cruise

-Late summer cruise

-Begin data entry

Oct-Dec (FY 98 funding includes funds for project closeout)

-Data analysis

Jan-April

-Prepare manuscript

-Submit final report (April 15, 1999)

Conferences

Pacific Seabird Group annual meeting

98144A	Common Murre Population Monitoring	D. Roseneau/USFWS	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Analyze FY 97 Barren Islands census data

Jan-March

DONE-Arrange logistics and hire personnel

April-June

DONE-Submit annual report (April 15)

DONE-Purchase supplies

July-Sept

DONE-Collect data at Chiswell Islands (July 10-Aug. 10)

UNDERWAY-Data entry

Publications

UNDERWAY; SUBMITTAL DELAYED TO SEPTEMBER 15 - 1989-97 postspill trends in murre population numbers, nesting chronology, and productivity in the Barren Islands colonies (submit May 15)

DRAFT

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98145-CLO	Cutthroat Trout and Dolly Varden: Relation Among and Within Populations of Anadromous and Resident Forms	G. Reeves/USFS, Pacific Northwest Research Station	USFS
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Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Continue otolith microchemistry analysis, and genetic and meristic analysis

Jan-March

DONE-Attend Annual Workshop

DONE-Same as above

April-June

-Same as above

July-Sept

-Complete genetic and meristic analysis

THE FOLLOWING TASKS ARE NOW FY 99 (EXECUTIVE DIRECTOR HAS RECOMMENDED PROJECT CONTINUATION IN FY 99)

-Submit final report (Sept.)

-Manuscript preparation

98149	Archaeological Site Stewardship	D. Reger/ADNR	ADNR
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Prepare draft report for 97149

Jan-March

DONE-Compile steward reports

April-June

DONE-Submit Annual Report (97149)

DONE-Complete review of site selection

UNDERWAY-Train stewards

UNDERWAY-Site visits

July-Sept

-Monitor sites (stewards)

98159	Surveys to Monitor Marine Bird Abundance in Prince William Sound during Winter and Summer 1998	S. Kendall and D. Irons/USFWS	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Arrange survey logistics

Jan-March

-Winter survey in PWS (March)

April-June UPDATE NOT RECEIVED

-Data entry

-Arrange survey logistics

July-Sept

-Summer survey in PWS (July)

-Data entry and analysis

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98161-CLO

**Differentiation and Interchange of
Harlequin Duck Populations Within the
North Pacific**

B. Goatcher/FWS

DOI

Project Tasks to be Completed this Quarter:

Oct-Dec

-

Jan-March

DID NOT ATTEND BECAUSE NOT ON AGENDA TO PRESENT-Attend Annual Workshop

April-June UPDATE NOT RECEIVED

-Submit final report (April 15)

-Submit final manuscript to journals (molecular genetics)

July-Sept

-Presentations at professional conferences

Conferences

FUNDS TRANSFERRED TO GENETICS-\$1.7 in travel funds provided for conference attendance

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98162

**Investigations of Disease Factors
Affecting Declines of Pacific Herring
Populations in Prince William Sound**

**G. Marty/UC Davis; R. Kocan
/Univ. Wash., C. Kennedy & A.
Farrell, Simon Fraser Univ.**

ADFG

Project Tasks to be Completed this Quarter:

FIELD EVALUATION (G. MARTY):

Oct-Dec

DONE (COLLECTED FROM 80 FISH)-Collect samples (Marty)

DONE-Scale analysis of November samples (Willette)

Jan-March

DONE-Attend Annual Workshop (Marty)

DONE-Virology and bacteriology of November samples (Meyers)

UNDERWAY-Plasma chemistries, VEN analysis, and leukocyte differential counts (Kennedy)

DONE-IgM assay (Marty)

UNDERWAY-Histopathology (Marty)

DONE-Identification of *Ortholinea orientalis* (Marty)

April-June

DONE-Submit annual report

DONE-Collect samples of wild fish (Marty)

July-Sept

-Statistical analysis (Farver)

DONE-Scale analysis of April samples (Willette)

DONE-Virology and bacteriology of April samples (Meyers)

Publications

-Results of study of spawn-on-kelp pound fisheries

-Marty, G.D., et al. 1998. Viral hemorrhagic septicemia virus, *Ichthyophonus hoferi*, and other causes of morbidity in Pacific herring *Clupea pallasii* spawning in PWS, Alaska. Diseases of Aquatic Organisms 32:15-40

LABORATORY COMPONENT/HERRING DISEASE (R. KOCAN):

Oct-Dec

DONE-Laboratory evaluation of VHSV survival in seawater

UNDERWAY-Evaluation of post-challenge antibody titer in herring

UNDERWAY-Collect tissues for PCR protocol development

UNDERWAY-Evaluate the mummichug (*Fundulus*) as an experimental surrogate for *Ichthyophonus* pathogenicity studies

Jan-March

UNDERWAY-Fertilize and hatch new herring larvae for FY 98 studies

UNDERWAY-Sea water survival studies on VHS virus

UNDERWAY-Antibody studies to VHSV in herring

UNDERWAY-Lab transmission studies with *Ichthyophonus*

April-June

DONE-Complete rearing of SPF herring from April 1997 hatch

UNDERWAY-Field-test a virus neutralization protocol for evaluating the immune status of wild herring

DONE-Field-test a method for evaluating *Ichthyophonus* prevalence in different age classes of wild herring

July-Sept

-Expose SPF and wild herring to VHS for immunity studies

-Collect plasma and tissues for virus assays

-Field-validate monitoring protocols

-Conduct virus plaque assays

-Close down Marrowstone Field station operation

Publications

-Kocan, R.M., et al. (in press) Pathogenicity of *Ichthyophonus hoferi* for laboratory-reared Pacific herring and its prevalence in wild Puget Sound herring. Dis. Aquat. Organisms.

**Exxon Valdez Oil Spill Project Status Summary
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LABORATORY COMPONENT/HERRING FITNESS (KENNEDY AND FARRELL):

Oct-Dec

UNDERWAY-Evaluate long-term recovery of herring immune systems following oil exposure

Jan-March

UNDERWAY-Determine the effects and recovery of wild herring from multiple stressors

UNDERWAY-Evaluate fitness criteria in herring under varying densities and temperatures for single stressors

DONE-Analyze herring blood smears and plasma chemistries for fall field samples from Section 1 of project

April-June

DONE-Analyze field samples for immunological parameters and plasma chemistries

UNDERWAY-Continue to evaluate fitness criteria in herring under varying densities and temperatures

July-Sept

DONE-Continue reproductive tests for oil exposure

-Evaluate temperature modulation of fitness criteria

-Finish data analysis for experiments

Publications

IN PREPARATION:

- (1) Effects of oil-water dispersion on survival and swimming performance of juvenile herring
- (2) Alterations in the immunocompetence and disease resistance of juvenile herring exposed to the oil-water dispersion fraction of crude oil
- (3) Biochemical stress response of juvenile and adult herring to an oil-water dispersion of crude oil
- (4) *Ichthyophonus hoferi* and viral hemorrhagic septicemia virus infection in herring: effects on biochemistry and immunology

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98163

**APEX: Alaska Predator Ecosystem
Experiment in Prince William Sound
and the Gulf of Alaska**

D. Duffy, et al/UAA

NOAA

Project Tasks to be Completed this Quarter:

Oct-Dec

- A: DONE-Complete 8-day survey of two process study sites in PWS
DONE-Complete analysis of forage species catch composition/length distribution from 1995 samples
- B:
- C: DONE-Complete processing 1996 diet and prey samples
DONE-Create relational database of 1996 stomach content and related information
DONE-Inventory samples collected for diet study in 1997
DONE-Submit publication from 1994 forage fish seasonal diet studies
- E:
- F:
- G: DONE-Analyze lab samples from FY 97
- J:
- K:
- L: DONE-Analyze data
- M:
- N:
- O: DONE-Participate in spatial analysis of 1995, 1996, and 1996 acoustic survey data
- Q:
- R: (project not approved until December 18, 1997)
- S:

Jan-March

- A: DONE-Complete analyses of CTD data collected in 1996
DONE-Complete analyses of acoustic data collected in 1996
- B:
- C:
- E:
- F:
- G:
- J:
- K:
- L:
- M:
- N:
- O: DONE-Interact with PIs on modification of 1998 data collection protocols
- Q: UNDERWAY-Assemble data from APEX, other pre- and post-spill studies, the Alaska Seabird Colony Register, and the models prepared during Year 1 of this project
- R: DONE-Arrange logistics
- S:

April-June

- A:
- B:
- C:
- E:
- F:
- G: DONE-Arrange logistics
- J: DONE-Arrange logistics and set up camp at East Amatuli Island
- K: DONE-Arrange logistics

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- L: UNDERWAY-Outsource design of electronic database
- M: UNDERWAY-Conduct seabird and hydroacoustic surveys in Kachemak Bay
 - UNDERWAY-Conduct trawl sampling in Kachemak Bay
 - UNDERWAY-Test other fishing methods
 - UNDERWAY-Set up field camps and/or study plots on Chisik, Gull, and Barren islands
- N: UNDERWAY-Complete lab analysis of birds and fish from 1997 field season
- O:
- Q: UNDERWAY-Adapt models derived in Year 1 to lower Cook Inlet and species therein
- R: UNDERWAY-Conduct baseline surveys
- S: UNDERWAY-Analyze field samples from summer 1997

July-Sept

- A:
- B:
- C: Begin field sample collection
- E:
- F:
- G: Field data collection
- J: Complete field work at East Amatuli Island
- K: Collect fish stomachs from charter operators and analyze contents
- L: Conduct survey
- M: Initiate pilot studies using radio telemetry
 - Conduct trawling and hydroacoustic surveys in lower Cook Inlet
 - Complete pelagic surveys, colony observations, telemetry studies, feeding rate and attendance observations, and fish sampling
- N:
- O: DONE-Consult with PIs on necessary modifications to field methods and analysis of 1998 data
- Q: Refine models of seabird foraging effort/breeding productivity
- R: Conduct diet observations at PWS and Kachemak Bay
 - Conduct juvenile surveys
 - Analyze data
- S: Field sampling (May-Aug.)
 - Conduct gut clearance rate experiments
 - Begin analysis of 1998 field samples

Publications:

- E: Budget includes \$.5 in page charges.
- F: Budget includes \$.2 in page charges.
- G: (1) Diet and reproduction in pigeon guillemots from PWS and Kachemak Bay
 - (2) Diet and reproduction in black-legged kittiwakes from PWS
 - (3) Effects of prey type and quality on postnatal growth and development of piscivorous seabirds: a captive feeding experiment
- L: (1) Long-term changes in the GOA marine ecosystem
 - (2) Early life history and dynamics of Pacific sand lance: Lower Cook Inlet and Shelikof Strait
 - (3) Long-term shifts in benthic commercial fishery species: a case study

Professional Conferences:

- E: Budget includes \$1.0 for travel to (unspecified) conference.
- F: Budget includes \$1.0 for travel to (unspecified) conference.
- G: Budget includes \$2.0 for travel to (unspecified) conference.
- J: Attend annual meeting of Pacific Seabird Group, Monterey, CA
- L: Present paper at International Pandalid Shrimp Symposium (tentative)
- N: Present results at annual meeting of Pacific Seabird Group, Monterey, CA
- Q: Budget includes \$.6 for travel to conference.
- R: Present paper at annual meeting of Pacific Seabird Group, Monterey, CA

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98165-CLO	Genetic Discrimination of Prince William Sound Herring Populations	J. Seeb, L. Seeb, S. Merkouris/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Sept

DONE-Conclude technology transfer

DONE-Conclude lab analysis of FY 96 samples (no FY 97 samples analyzed)

DONE-Conclude data analyses

-Submit final report in form of manuscript (Sept. 30) -- see 97165 for status

Jan-March

UNDERWAY-Evaluate contractor's report

Professional Conference

DONE-AFS, Alaska Chapter (Sitka, November)

?, Seattle (travel funding provided). PI says (8/4/98) "travel will occur if needed"

98166-CLO	Herring Natal Habitats	M. Willette/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Complete 1997 biomass estimate

Jan-March

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April-June

DONE-Submit final report (97166)

July-Sept

-Submit revised final report (post-peer review)

Publications

Pacific herring assessment using SCUBA surveys to estimate spawn deposition. NAJFM.

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98169	A Genetic Study to Aid in Restoration of Murres, Guillemots, and Murrelets in the Gulf of Alaska	V. Friesen/Queen's University, J. Piatt/USGS	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Complete screening of samples available prior to FY 97 for variation in the mitochondrial control region

Jan-March

DONE-Attend Annual Workshop

April-June

DONE-Screen FY 97 samples for variation at 8 microsatellite loci

DONE-Arrange logistics

July-Sept

-Collect blood, feather, and tissue samples

-Present interim results at conferences

-Begin screening FY 97 samples for variation at 10 nuclear introns

Conferences

Society for Conservation Biology or Society for Study of Evolution

98170-CLO	Isotope Ratio Studies of Marine Mammals in Prince William Sound	D. Schell/UAF	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DELAYED-Collect vibrissae from isotopically labeled seals and sea lions at Mystic, Connecticut

Jan-March

DONE: Move seals from Mystic, Connecticut to Alaska SeaLife Center

UNDERWAY; MOST ANALYSES COMPLETE EXCEPT FOR ONGOING CAPTIVE ANIMAL STUDIES-Prepare and analyze isotope ratio samples collected 1994-97

April-June

DONE-Synthesize isotope data

UNDERWAY-Work on manuscript

July-Sept

DONE-Complete captive animal sampling

-Submit final report

-Prepare manuscript (Sept.)

Conferences

Marine Mammology Conference in Monaco (Jan.)

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98180	Kenai Habitat Restoration and Recreation Enhancement	M. Kuwada/ADFG, A. Weiner/ADNR	ADNR
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Project Tasks to be Completed this Quarter:

Oct-Dec

ONGOING-Complete construction on 1997 project

ONGOING-Inspect 1997 projects for compliance with design and construction parameters

DONE-Close out completed cooperative agreements

Jan-March

DONE-Prepare annual report (97180)

April-June

DONE; RFP ON STREET-Complete review of detailed design plans for 1998 projects

UNDERWAY-Establish cooperative agreements for 1998 projects

UNDERWAY-Design and produce educational materials

UNDERWAY-Put up signs and information displays

NOT NECESSARY-Publish supplemental EA

UNDERWAY-Manage and oversee project construction

July-Sept

-Inspect all 1998 project sites for compliance with design parameters

-Monitor revegetation sites

-Monitor public use of completed project and proposed sites for next year

98186-CLO	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound	T. Joyce/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Analyze decoded tags

DONE-Provide survival by tag code

DONE-Provide contribution to fisheries from coded wire tag analyses

Jan-Mar

DONE-Attend Annual Workshop

April-June

DONE-Review and analyze data

July-Sept

-Complete data analysis

-Submit final report (Sept. 30) -- see 97186 for status

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98188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon In Prince William Sound	T. Joyce/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Apply thermal marks to BY 97 embryos at four pink salmon hatcheries

Jan-March

DONE-Collect samples from incubators to evaluate thermal mark quality

DONE-Evaluate quality of stock estimation procedure for BY 95

DONE-Collect samples from incubators for BY 97 blind test

April-June

DONE-Submit annual report (97188)

UNDERWAY-Process and evaluate otoliths

DONE-Collect samples from wild systems for BY 97 blind test

July-Sept

-Collect and process otoliths

-Analyze data

-Make recommendations

98190	Construction of a Linkage Map for the Pink Salmon Genome	F. Allendorf/Univ. Montana	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Continue screening of DNA polymorphisms to test for Mendelian inheritance and joint segregation in 1995 brood-year progeny

NOW HAVE 550 MARKERS ON THE MAP THAT CONSISTS OF 62 LINKAGE GROUPS-Continue constructing detailed linkage map of pink salmon

NOW HAVE GENE-CENTROMERE MAPPED 185 LOCI-Begin gene-centromere mapping of loci on the map

Jan-March

-NOW HAVE 590 MARKERS ON THE LINKAGE MAP THAT CONSISTS OF 50 LINKAGE GROUPS

-NOW HAVE GENE-CENTROMERE MAPPED 250 LOCI

-MANUSCRIPT DESCRIBING PHASE 1 (INHERITANCE OF OVER 500 MARKERS IN HAPLOIDS) ACCEPTED IN JOURNAL OF HEREDITY

April-June

--NOW HAVE 617 MARKERS ON THE LINKAGE MAP THAT CONSISTS OF 56 LINKAGE GROUPS

-NOW HAVE GENE-CENTROMERE MAPPED 266 LOCI

July-Sept

-Consolidate linkage map

-Place allozyme, microsatellite, and other codominant markers (MHC, etc) onto the map

-Begin studies at Alaska SeaLife Center

Conferences

-Present papers at two conferences (NAMES AND DATES NOT PROVIDED)

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98191A	Field Examination of Oil-Related Embryo Mortalities in Pink Salmon Populations in Prince William Sound	M. Willette/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Conduct field sampling in oil and control streams

DONE-Conduct preliminary analyses of FY 97 field data

Jan-March

UNDERWAY-Analyze BY 97 embryo data

April-June

DONE (97191A-1); UNDERWAY (97191A-2)-Submit annual report (April 15)

July-Sept

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Conferences

American Fisheries Society Meeting (Willette and Bue) (Nov.)

98194-CLO	Pink Salmon Spawning Habitat Recovery	M. Murphy, S. Rice/NOAA	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Collate data from all projects and compare with stream sediments

Jan-March

DONE-Attend Annual Workshop

DONE-Prepare manuscript for publication

April-June

DONE-Submit final report (May 1)

July-Sept

-

Publications

Transactions of the American Fisheries Society: Initial oil concentrations, habitat recovery, effects of beach cleanup, causes of variation in habitat recovery, and relationships to pink salmon embryo survival

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98195 Pristane Monitoring in Mussels

J. Short, P. Harris/NOAA

NOAA

Project Tasks to be Completed this Quarter:

Oct-Dec

-

Jan-March

UNDERWAY-Analyze 1997 hydrocarbon data

UNDERWAY-Revise brochure

DONE-Attend Annual Workshop

April-June

DONE-Submit annual report (97195)

UNDERWAY-Prepare report for public and high schools

July-Sept

-Collect mussel samples

-Analyze samples for pristane

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98196

**Genetic Structure of Prince William
Sound Pink Salmon**

C. Habicht/ADFG

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Finish allozyme lab analysis of 1996 collections

DONE-Finish mtDNA analysis of 1996 collections

Jan-March

DONEAttend Annual Workshop

DONE-Statistically analyze 1996 collections

April-June

DELAYED-Submit annual report (April 15)

LAB WORK COMPLETED FOR 1994-96 COLLECTIONS; 1997 COLLECTIONS WILL UNDERGO LAB WORK BY END OF SEPTEMBER-Finish evaluation of population structure for 1994-96 collections

THE FOLLOWING WILL BE ACCOMPLISHED AFTER LAB WORK IS COMPLETED

-Conduct mtDNA analysis of 1997 collections

-Conduct allozyme lab analysis of 1997 collections

OTHER ACTIVITY THIS QUARTER - Presented results to stakeholders (fishers and others) in Cordova

July-Sept

-Conduct allozyme lab analysis of experimental matings

-Statistically analyze 1997 collections and 1996 matings

Conferences

CANCELED BECAUSE LAB STAFF COMMITTED TO WORKING ON THE PROJECT AT THAT TIME; PLAN TO PRESENT WORK INSTEAD AT AFS WESTERN DIVISION MEETING-Present paper at AFS Alaska chapter, Juneau (November 1997)

SUBMITTED ABSTRACT-Present paper at AFS National Meeting, Santa Monica, CA (August 1998)

Publications

UNDERWAY - 1) Allozymes and mtDNA describe population structure of even-year pink salmon affected by EVOS in PWS

DONE - 2) Discrimination of even- and odd-year pink salmon populations from Alaska using restriction site variation from the mitochondrial ND5/6 genes (Molecular Ecology)

DONE - 3) Genetic variation at microsatellite loci in North American odd-year pink salmon (Transactions of the American Fisheries Society)

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98210 Youth Area Watch

**R. Sampson/Chugach School
District**

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Select students for participation in Youth Area Watch program

DONE-Provide protocol training (RE core research projects) to site teachers

DONE-Provide protocol training (RE core research projects) to students

DONE-Identify local research projects for each site

DONE-Develop local project protocols

DONE-Prepare weather station at each site

ALSO: Trained students and teachers in Seward and Valdez in harbor seal biological sampling

Students participated in research activities (juvenile herring sampling and oceanographic data collection) aboard the Kyle David and Miss Kaylee

Tentative plans made for Tatitlek students to work on surf scoter project (98273)

Prepared poster for Annual Restoration Workshop

Jan-March

UNDERWAY-Project coordinator send data to PIs

ALSO COMPLETED DURING JANUARY-MARCH QUARTER:

Mid-year site coordinator meeting in Anchorage

Blue mussel protocol training for site coordinators and students

Students presented poster at Annual Workshop

Students designing/constructing web page

April-June

DONE-Project coordinator send data to PIs

DONE-Students complete project reports

July-Sept

-

Publications

DONE 3/12-Article submitted to The Science Teacher for consideration for publication

**98220-CLO Eastern Prince William Sound
Wildstock Salmon Habitat Restoration**

D. Schmid/USFS

USFS

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Conduct adult escapement counts of coho salmon at Plateau Creek

Jan-March

-

April-June

DONE-Conduct population estimates in enhanced areas

July-Sept

-Assess effects of spring runoff on structures

-Repair structures, if needed

-Submit final report

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98225	Port Graham Pink Salmon Subsistence Project	E. Anahonak, Port Graham IRA Council	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Heat-treat incubators containing the lots intended for extended rearing and heated water rearing, to produce a separate otolith mark for each lot

UNDERWAY-After eye-up, eggs from the lot intended to reach 1 gram by late May are put on a heated water regimen

Jan-March

-

April-June

SCHEDULED ACTIVITIES DELAYED; MODIFYING COHO FACILITY (DUE TO FIRE) TO ACCEPT PINK SALMON EGGS THIS FALL

-Release heated-water-rearing lot into zooplankton bloom (May)

-Release standard-treatment-rearing lot into zooplankton bloom (May)

July-Sept

-Release extended-rearing lot (late June, early July)

-Monitor pink salmon return to Port Graham

-Capture hatchery broodstock

-Egg take

98244-CLO	Community-Based Harbor Seal Management and Biological Sampling	M. Reidel/Alaska Native Harbor Seal Commission	ADFG
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Project Tasks to be Completed this Quarter:

Ongoing (Dec-Sept)

UNDERWAY-Biological sample collection

Oct-Dec

DONE-Update contracts with ANHSC and UAF

DONE-Hire local biosampling technicians

DONE-Conduct training sessions for new technicians

Jan-March

DONE (MARCH)-ANHSC Workshop

DELAYED UNTIL APRIL-Produce and distribute proceedings report from ANHSC Workshop

April-June

WORKSHOP TOOK PLACE IN FAIRBANKS TO EVALUATE BIOSAMPLING PROGRAM

July-Sept

PRELIMINARY DRAFT SUBMITTED 8/3/98-Submit final report (Sept. 30)

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98247	Kametolook River Coho Salmon Subsistence Project	Perryville Village Council	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Conduct escapement surveys (Perryville personnel)

DONE-Perform coho salmon egg take

DONE-Sample salmon for genetic and pathology tests

DONE-Consult with teachers

DONE-Set up school aquarium

Jan-March

DONE-Attend Alaska Board of Fish meeting

DONE-Transport eyed eggs to the aquarium

DONE-Analyze subsistence and commercial harvest data

April-June

DONE-Review meeting with assessment team to evaluate the project proposal for FY 99

DONE-Perryville students release aquarium fry (May)

July-Sept

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98250	Project Management	All Trustee Council Agencies	ALL
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Project Tasks to be Completed this Quarter:

Not applicable

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98252	Investigations of Genetically Important Conservation Units of Rockfish and Walleye Pollock	J. Seeb, L. Seeb, S. Merkouris/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DELAYED TILL JANUARY DUE TO GENETICS STAFF REORGANIZATION-Recruit and hire Alaska SeaLife Center staff

PWS COLLECTIONS SCHEDULED FOR LATE 1/98 OR EARLY 2/98; SHELIKOF STRAIT COLLECTION SCHEDULED FOR 2/98. ALSO MAY SAMPLE DOCKSIDE IN CORDOVA FOR DEEP-WATER FISHERY DELIVERIES FROM N. YAKUTAT OR MIDDLETON ISLAND FOR COMPARISON TO INNER PWS WATERS FISH (PT. BAINBRIDGE, ORCA BAY) -Plan 1998 pollock collections

Jan-March

DONE-Attend Annual Workshop

PWS, MIDDLETON IS., SHELIKOF STRAIT, BOGOSLOF IS. DONE; BERING SEA UNDERWAY-Conduct pollock tissue collections

DELAYED FOR SEALIFE CENTER-Conduct experimental pollock matings

April-June

DONE; ONE YELLOWEYE ROCKFISH (GOA) COMPLETE-Plan 1998 rockfish collections

July-Sept

-Conduct rockfish collections

-Perform first pink salmon egg take at Alaska SeaLife Center

-Analyze laboratory data

Conferences

-American Fisheries Society

98254-CLO	Delight and Desire Lakes Restoration	J. Edmundson/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Perform data summaries and historical data compilation

Jan-March

SUBMITTED APRIL 15-Submit final report (Jan.)

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98256B	Sockeye Salmon Stocking at Solf Lake	D. Gillikin/USFS, P. Shields/ADFG	USFS
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE FOR THE DAM; DELAYED TO FY 99 FOR FISHWAY-Complete final design of fishway and dam (USFS)

Jan-March

DONE-Attend Annual Workshop

April-June

DONE-Submit annual report (97256B) (USFS)

DONE-Receive necessary permits

DONE-Award logistics contracts (USFS)

DONE-Release first year of sockeye fry at Solf Lake (PWSAC)

July-Sept

-Reconstruct dam at old outlet (USFS)

-Conduct limnological sampling and prepare report (ADFG)

-Conduct egg take for 1999 stocking at Solf Lake (PWSAC)

98263	Assessment, Protection and Enhancement of Salmon Streams in Lower Cook Inlet	W. Meganack, Jr./Port Graham Corporation	ADFG
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Project Tasks to be Completed this Quarter:

NOTE: FUNDING APPROVED DECEMBER 18, 1997

Jan-March

UNDERWAY-Apply for permits

DONE-Secure approval of CIRPT

DONE-Contract for preliminary engineering design and evaluation

April-June

DONE-Prepare EAs

DONE-Complete preliminary engineering design

DELAYED PENDING RECEIPT OF NECESSARY PERMITS (HABITAT PERMITS ISSUED FOR FISH PASS; REARING POND PERMIT STILL UNDER REVIEW) - Contract for construction

July-Sept

Construct fish pass on Port Graham River

Construct rearing ponds on Windy Creek Left

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98273	Surf Scoter Life History and Ecology: Linking Satellite Technology with Traditional Knowledge to Conserve the	D. Rosenberg/ADFG	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Coordinate and plan community involvement, Youth Area Watch, and TEK

ATTENDED WORKSHOPS IN TATITLEK AND PORT GRAHAM-Attend synthesis workshops in local communities

Jan-March

DONE-Meet with subsistence harvesters

DONE-Attend Annual Workshop

DONE-Prepare for field season

April-June

DONE-Conduct reconnaissance surveys for scoter concentrations

DONE-Capture birds and implant radios

July-Sept

-Monitor satellite transmitters

-Coordinate community involvement, Youth Area Watch, TEK

98274	Documentary Film on Subsistence Use of Herring, Herring Spawn, and Resources in the Nearshore	G. Kompkoff/Tatitlek Village Council	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Award contract for filmmaking

Jan-March

UNDERWAY-Contractor develop story line for film

COMPLETED-Filming (Tatitlek)

April-June

UNDERWAY-Additional filming (Tatitlek, Prince William Sound)

July-Sept

-Edit film

December 1998

-Film complete

-Contractor deliver 100 copies of film

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
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98286	Elders/Youth Conference on Subsistence and the Oil Spill	B. Henrichs /Native Village of Eyak	DOI
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Project Tasks to be Completed this Quarter:

NOTE: FUNDING APPROVED DECEMBER 18, 1997

Oct-Dec

DONE-Hire conference planning coordinator
DONE-Send invitation letters to participating speakers
DONE-Confirm selected speakers
DONE-Arrange conference logistics

Jan-March

DONE-Announce conference
DONE-Finalize conference agenda and speakers

April-June

CONFERENCE WILL TAKE PLACE AUGUST 19-22 IN CORDOVA -Hold conference (May 7-9)

July-Sept.

-Distribute conference proceedings

98289-BAA	Status of Black Oystercatchers in Prince William Sound	S. Murphy/ABR, Inc.	NOAA
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Project Tasks to be Completed this Quarter:

NOTE: FUNDING APPROVED DECEMBER 18, 1997

Jan-March

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April-June

DONE-Arrange logistics
UNDERWAY-Conduct field sampling

July-Sept

-Keypunch data and QA/QC
-Data analysis

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	B. Nelson/NOAA	NOAA
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Project Tasks to be Completed this Quarter:

Ongoing

- Store samples
- Analyze data

April-June

DELAYED TO OCTOBER-Submit annual report in the form of updated public release of hydrocarbon data software (April 15)

Conferences

- Quality Assurance/Quality Control Annual Meeting, Washington, DC

98297-BAA	Oceanography of Prince William Sound Bays and Fjords	S. Vaughan/PWSSC	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

- DONE-SEA herring October cruise
- DONE-Deploy temperature loggers
- UNDERWAY-Analyze field data

Jan-March

- DONE-Attend Annual Workshop
- DONE-SEA herring March cruise
- RETRIEVED 9 OF 12 (2 IN ZAIKOF BAY AND 1 IN WHALE BAY WERE MISSING)-Retrieve temperature loggers

April-June

- DONE-Deploy drifting buoys

July-Sept

- Submit final report (Sept. 30)
- Submit manuscripts for publication (Sept. 30)

Publications

- 1) Circulation and water mass properties in the bays and fjords of PWS. Continental Shelf Research or Journal of Geophysical Research
- 2) Retention mechanisms for juvenile Pacific herring. Transactions of the American Fisheries Society

**Exxon Valdez Oil Spill Project Status Summary
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98300	Synthesis of the Scientific Findings from the <i>Exxon Valdez</i> Oil Spill Restoration Program	R. Spies/Applied Marine Sciences	ADNR
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Finalize list of invitees to food-web modeling workshop (sponsored under Project 98330)

DONE-Finalize agenda for food-web modeling workshop

DONE-Submit list of proposed scientific synthesis papers to Executive Director

Jan-March

DONE-Conduct food web modeling workshop

April-June

TASK REDEFINED: PARAMETERS FOR LONG-TERM ECOSYSTEM MONITORING COMPLETE; DELIVERED AT ANNUAL RESTORATION WORKSHOP-Submit draft strategy for integrating science and management to Executive Director

July-Sept

-Complete preliminary draft of first scientific synthesis paper

98302-CLO	Prince William Sound Cutthroat Trout, Dolly Varden Char Inventory	M. Schelske/USFS	USFS
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Project Tasks to be Completed this Quarter:

Oct-Dec 1997

DELAYED-Submit final report (97302)

98306	Ecology and Demographics of Pacific Sand Lance in Lower Cook Inlet	J. Piatt/USGS	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Collect fish

Jan-March

DONE-Complete bibliography

April-June

DONE-Submit annual report (97306) in form of manuscript on sand lance maturity, spawning, and age structure (April 15)

July-Sept

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**Exxon Valdez Oil Spill Project Status Summary
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98311

**Pacific Herring Productivity
Dependencies in the Prince William
Sound Ecosystem Determined With**

T. Kline/PWSSC

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE (800 SAMPLES SELECTED)-Prepare archived samples for mass spectrometry

Jan-March

DONE-Send samples to UAF for mass spectrometry

DONE-Prepare new samples for mass spectrometry

DONE-Collect final fish samples (March)

April-June

DONE-Samples undergoing mass spectrometry at UAF

July-Sept

-Initial 311 data expected from UAF; process data

-Prepare new samples for mass spectrometry

-Expect last samples from A.J. Paul following energetic analysis

Publications

Budget includes \$400 in page charges; title and journal not provided

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98320	Sound Ecosystem Assessment (SEA)	T. Cooney, et al/UAF	ADFG
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Project Tasks to be Completed this Quarter:

98320E (Salmon Predation) (Willette)
 -Publications: RESUBMITTED; IN REVIEW: CANADIAN JOURNAL FISH AND AQUATIC SCIENCE-(1) Processes affecting consumption of juvenile salmon by age 3+ pollock in nearshore habitats
 UNDERWAY-(2) Processes affecting consumption of juvenile salmon by age 1-2 pollock in nearshore habitats

98320G (Phytoplankton and Nutrients) (McRoy)
 DONE-Continue time series measurements at AFK Hatchery
 DONE-Attend American Geophysical Union/Ocean Sciences Meeting, San Diego (Feb. 1998)

98320H (Zooplankton) (Cooney)
 DONE-Analyze samples collect by OPC/acoustic projects
 UNDERWAY-Analyze and interpret time-series collections
 UNDERWAY-Publish studies of the relationships between physical structure, phytoplankton biomass, macrozooplankton biomass/species composition
 DID NOT ATTEND; REPROGRAM TO PUBLISHING RESULTS-Attend AGU Ocean Sciences Meeting

98320I (Food Web Dependencies/Stable Isotope Tracers) (Kline)
 DONE-Sample terminal feeding stage *Neocalanus* in GOA and PWS
 DONE-Determine characteristic isotopic signatures for GOA and PWS each year (1994-96)
 DONE-Compare prevalence of lake/river copepods to those found in previous years (1994-96)
 UNDERWAY-Compare assessment with model forecasts of copepod seeding
 DONE-Attend AGU Ocean Sciences Meeting, San Diego (Feb. 1998)
 -Publish: IN REVISION-(1) Spatial patterns of GOA carbon in PWS pelagic food webs
 IN REVISION-(2) Fall isotopic/somatic energy signatures: young of the year herring
 UNDERWAY-(3) Trophic relations and carbon sources of the pelagic community of PWS
 UNDERWAY-(4) Evidence for flow of zooplankton into PWS from northern GOA
 JUST PUBLISHED-(5)Confirming forage fish food web dependencies

98320J (Modeling and Information Services) (Patrick)
 UNDERWAY-Complete assessment of minimum measurements for (1) initializing and updating the model for macrozooplankton advection, growth, and mortality and (2) contribution of primary production to fry feeding and to strength of next generation
 UNDERWAY-Extend fish models to include coupling between fish populations of salmon, Pacific herring, and pollock along with coupling of each to macrozooplankton
 UNDERWAY-Continue model refinement
 UNDERWAY-Perform model validation
 UNDERWAY-Provide validated April-May circulation fields for input to ecosystem/fisheries model
 DID NOT ATTEND; USED FUNDS TO PAY JIA WANG TRAVEL TO EVOS MEETING AND TO MODELING MEETING
 IN CORDOVA-Attend AGU Ocean Sciences Meeting, San Diego (Feb. 1998)
 -(\$1,000 in publication costs provided in budget)

98320M (Observational Physical Oceanography) (Vaughn)
 UNDERWAY-Fusion of large scale oceanographic data into numerical circulation model
 UNDERWAY-Continue data analysis to identify physical "river" and "lake" signals and conditions
 DONE-Design cost-effective monitoring scheme: oceanographic/meteorological variables
 DONE-Attend AGU Ocean Sciences Meeting, San Diego (Feb. 1998)
 UNDERWAY-Prepare collaborative manuscripts (\$1,000 in publication costs provided in budget)

98320N (Nekton and Plankton Acoustics) (Thomas)
 DONE-Measure fall distributions of juvenile herring
 DID NOT ATTEND-Present acoustics paper at AGU Ocean Sciences Conference, San Diego (Feb. 1998)

**Exxon Valdez Oil Spill Project Status Summary
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98320R (Trophodynamic Modeling and Remote Sensing) (Eslinger)

UNDERWAY-Implement 3-dimensional plankton model

UNDERWAY-Collect and analyze satellite images of sea surface temperature and ocean color

UNDERWAY-Continue model refinement

UNDERWAY-Design and implement a demonstration nowcast system

DONE-Perform model validation

DONE-Attend AGU Ocean Sciences Meeting, San Diego (Feb. 1998)

DRAFT MANUSCRIPT WRITTEN-(\$1,000 in publication costs provided in budget)

98320T (Pacific Herring Recruitment Model) (Norcross/Stokesbury)

DONE-Conduct five 10-day surveys of PWS nearshore ichthyofauna

DONE-Complete 2-month aerial survey, linked with APEX and NVP

DONE-Analyze Oct. '95, Mar. '96, and July '96 broadscale data

DONE-Present at AAAS meeting in Valdez

DONE-Analyze growth of juvenile herring in four bays

UNDERWAY-Analyze survival of juvenile herring in four bays

UNDERWAY-Analyze aerial survey data

UNDERWAY-Analyze diet data

DONE-Norcross: Present project data at AFS meeting

-Publications:

UNDERWAY-(1) Assessment of forage fish distribution/abundance: aerial surveys

UNDERWAY-(2) Spatial and temporal differences in diet of juvenile herring in PWS

SUBMITTED: Publication on broadscale data to Marine Ecology Progress Series, publication on juvenile herring growth data to Environmental Biology of Fish, publication on juvenile herring diet data to Canadian Journal of Zoology

98320T-SUPP (Herring TEK) (Seitz)

Oct-Dec

DONE-Complete interviews in Tatitlek, Cordova, Homer

DONE-Hire data-entry technician; enter data into Excel and r-base

DONE-Produce map

DONE-Prepare materials for EVOS review

Jan-March

UNDERWAY-Complete interviews in Seward, Chenega Bay, and Valdez

DELAYED TO SUMMER-Review Tatitlek data in Tatitlek

DELAYED TO SUMMER-Review Homer data in Homer

UNDERWAY-Historical commercial fisheries analysis

April-June

UNDERWAY-Complete data entry, verification, transcription

UNDERWAY-Data analysis using Excel, ACCESS, ARC Inf

July-Sept

-Submit draft reports for community review

-Complete final report

-Submit journal article for publication

98320U (Somatic Energies) (Paul)

DONE-Process 1997 somatic energy fish collections

UNDERWAY-Provide samples to /320I for isotopic analysis

UNDERWAY-Process 1988 somatic energy samples

UNDERWAY-Analyze geographic variations in somatic energy of herring from 1995-97

PAPER ACCEPTED-Submit paper on pollock energetics for review

DONE-Submit paper on summer herring energetics

98320Z (SEA Synthesis) (Cooney)

Oct-Dec

DONE-Prepare for EVOS workshop, meeting in Cordova

**Exxon Valdez Oil Spill Project Status Summary
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Jan-March

DONE-SEA review/Annual Restoration Workshop

April-June

DONE-Submit integrated annual report (April 15)

July-Sept

DONE-Workshop on synthesis volume

98325-BAA	Assessment of Injury to Intertidal and Nearshore Subtidal Communities: Preparation of Manuscripts	T. Dean/Coastal Resources Associates, Inc.	NOAA
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Project Tasks to be Completed this Quarter:

Publications

Jan-March -- NONE SUBMITTED

- 1) Comparison of study designs for assessment of shoreline impacts of EVOS
- 2) Fucus and EVOS
- 3) Injury to and recovery of rocky intertidal communities in PWS
- 4) Factors limiting recovery of limpet populations following EVOS
- 5) Effects of EVOS and non-anthropogenic factors on the distribution and abundance of nearshore benthic fishes in PWS
- 6) Impacts of EVOS on benthic communities in eelgrass habitats

98327	Pigeon Guillemot Restoration Research at the Alaska SeaLife Center	D. Roby/Oregon State Univ.	DOI
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Project Tasks to be Completed this Quarter:

Oct-Dec

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Jan-March

-

April-June

NEPA APPROVED 4/3/98

DONE-Install artificial nest sites, decoys, and playback sound equipment at Alaska SeaLife Center
ALSO collected eggs, incubated and hatched chicks. Hatching continues; diet experiment underway.

July-Sept

- Collect field data on guillemot use of artificial nest sites
- UNDERWAY-Raise guillemot nestlings in captivity
- Conduct captive rearing experiments
- Release captive-reared fledglings

**Exxon Valdez Oil Spill Project Status Summary
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98329	Synthesis of the Toxicological Impacts on Pink Salmon	S. Rice/NOAA	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Collate data from final reports of all Trustee-sponsored studies and all appropriate Exxon studies

DONE-Meet with PIs to evaluate past studies

ONGOING-Review Exxon studies

UNDERWAY-Formulate an outline and schedule for the monograph

Jan-Sept

UNDERWAY-Meet with PIs; develop list of draft publication titles, conceptual outlines, and proposed journals for publication

98330-BAA	Mass-Balance Model of Trophic Fluxes in Prince William Sound	D. Pauly/UBC, S. Pimm/U. Tenn	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Conduct literature search

Jan-March

DONE-Hold ECOPATH meeting

DONE-Present concept at Annual Workshop

April-Sept

UNDERWAY-Refine model initially specified during workshop

-Present model at scientific conferences and in the primary literature

98338	Survival of Adult Murres and Kittiwakes in Relation to Forage Fish Abundance	J. Piatt/USGS	DOI
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Project Tasks to be Completed this Quarter:

NOTE: FUNDING APPROVED DECEMBER 18, 1997

Jan-Mar

DONE-Attend Annual Workshop

April-June

DONE-Arrange logistics

July-Sept

-Conduct field work

-Begin data analysis

Conferences

Annual Meeting of the Pacific Seabird Group

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98339	Prince William Sound Human Use and Wildlife Disturbance Model	K. Murphy, L. Suring/USFS	USFS
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Project Tasks to be Completed this Quarter:
NOTE: FUNDING APPROVED DECEMBER 18, 1997

Jan-March

UNDERWAY-Model development

UNDERWAY-Literature review

DONE-Attend Annual Workshop

April-June

UNDERWAY-Conduct aerial surveys

DONE-Conduct user surveys

July-Sept

-Conduct preliminary test of model based on initial aerial survey results

WILL DELAY TO OCT/DEC-Begin analysis of survey results and evaluation of model

98340	Toward Long-Term Oceanographic Monitoring of the Gulf of Alaska Ecosystem	T. Weingartner/UAF	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Purchase mooring equipment

DELAYED BY HARSH WEATHER AT THE MOUNT OF RESURRECTION BAY; RESCHEDULED FOR

JANUARY-Deploy mooring equipment

DONE EXCEPT FOR DECEMBER DUE TO WEATHER-Monthly CTD surveys

Jan-March

DONE-Monthly CTD surveys

ALSO, DEPLOYED MOORING EQUIPMENT (MARCH)

April-June

DONE-Monthly CTD surveys

July-Sept

-Monthly CTD surveys

-If FY 99 field monitoring is not funded, recover mooring and begin processing data; make data available on homepage one month after recovery of the mooring

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98341	Harbor Seal Recovery: Controlled Studies of Health and Diet	M. Castellini/UAF	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Prepare permits for harbor seals
DONE-Equipment and supply specifications
DONE-Prepare feeding protocols

Jan-March

UNDERWAY-Set up Mn++ analysis
UNDERWAY-Test laboratory AE protocols
DONE-Transfer harbor seals to SeaLife Center

April-June

UNDERWAY-Conduct initial health surveys of harbor seals

July-Sept

-Conduct health surveys of stranded and rehabilitation harbor seal pups
-Conduct food trials of healthy animals on mixed fish diets

Conferences

DONE-Experimental Biology Meeting, San Francisco (April)

98346	Publication of an Indexed Bibliography of the Genus Ammodytes (Sand Lance)	R. Armstrong/UAA, M. Willson/USFS, M. Robards/DOI	USFS
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Project Tasks to be Completed this Quarter:

Oct-Dec

UNDERWAY-Finish key words and summaries

Jan-March

DELAYED TO FY 99 (SEE 99346)-Submit final report to Chief Scientist for peer review

April-June

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July-Sept

DELAYED TO FY 99 (SEE 99346)-Publish bibliography (perhaps as a Biological Paper of the University of Alaska, Institute of Arctic Biology or as a Pacific Northwest Research Station General Technical Report) (Sept.)

**Exxon Valdez Oil Spill Project Status Summary
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98347	Fatty Acid Profile and Lipid Class Analysis for Estimating Diet Composition and Quality at Different	R. Heintz/NOAA	NOAA
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Purchase Evaporative Light Scattering Detector

Jan-March

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April-June

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July-Sept

-Complete analysis of herring, sandlance, zooplankton

Conferences

National Meeting of American Fisheries Society, Santa Monica (Aug.)

98348	Responses of River Otters to Oil Contamination: A Controlled Study of Biological Stress Markers	M. Ben-David, T. Bowyer, L. Duffy/UAF	ADFG
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Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Develop and refine study design and integration with NVP project (1025)

ALSO: Developed plans for housing river otters and fish

Obtained approval of UAF Independent Animals Care and Use Committee

Obtained ADFG trapping permits

Jan-March

DONE-Attend Annual Workshop

DONE-Arrange logistics

April-June

DONE (15 YOUNG ADULT MALES FROM PRINCE WILLIAM SOUND)-Live-trap river otters and transport to Alaska SeaLife Center

July-Sept

-Conduct experiments at Alaska SeaLife Center

Conferences

M. BEN-DAVID PRESENTED POSTER - Effects of oil on wildlife: 5th International Symposium, Monterey, California, November 1997

98424	Restoration Reserve	All Trustee Council Agencies	ALL
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Project Tasks to be Completed this Quarter:

An additional \$12 million was approved by the Trustee Council August 6, 1997 for deposit to the Restoration Reserve during FY 98. In light of the possible transfer of the funds out of the Court Registry Investment System, the Reserve deposit is being held in the liquidity account.

**Exxon Valdez Oil Spill Project Status Summary
FY 98 Work Plan
Quarter Ending June 30, 1998**

98427-CLO Harlequin Duck Recovery Monitoring

D. Rosenberg/ADFG

ADFG

Project Tasks to be Completed this Quarter:

Oct-Dec

DONE-Maintain and store field equipment

DONE-Data entry and analysis

UNDERWAY-GIS and map preparation

Jan-March

DONE-Attend Annual Workshop

April-June

DELAYED-Submit final report (April 15)

DELAYED-Submit manuscripts (April 15)

Conferences

ATTENDED-Harlequin Duck Working Group biennial meeting (March)

Table 1. History of Project Costs / FY 99 Work Plan

<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
Pink Salmon	\$1,834.7	\$847.6	\$1,512.6	\$2,316.9	\$1,901.8	\$1,806.1	\$1,202.3	\$835.1	\$419.1	\$11,422.0	\$1,254.2	\$12,676.2
076 / Effect of Oil on Straying and Survival	\$0.0	\$0.0	\$0.0	\$184.1	\$371.3	\$577.0	\$272.2	\$0.0	\$0.0	\$1,404.6	\$0.0	\$1,404.6
093 / Diversion of Harvest Effort	\$0.0	\$0.0	\$0.0	\$57.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$57.8	\$0.0	\$57.8
139 / Salmon Instream Habitat Restoration	\$0.0	\$0.0	\$222.1	\$25.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$247.5	\$0.0	\$247.5
139A1 / Little Waterfall Barrier Bypass Improvement	\$0.0	\$0.0	\$0.0	\$83.8	\$33.1	\$26.4	\$13.4	\$0.0	\$0.0	\$156.7	\$0.0	\$156.7
139A2 / Port Dick Spawning Channel	\$0.0	\$0.0	\$0.0	\$41.0	\$222.8	\$75.5	\$85.8	\$85.8	\$62.0	\$425.1	\$147.8	\$572.9
139C1 / Montague Riparian Rehabilitation Monitoring	\$0.0	\$0.0	\$0.0	\$49.3	\$8.4	\$8.4	\$0.0	\$0.0	\$0.0	\$66.1	\$0.0	\$66.1
186 / Coded-wire Tagging and Recovery	\$1,421.8	\$148.6	\$237.7	\$253.9	\$239.8	\$244.6	\$120.2	\$0.0	\$0.0	\$2,666.6	\$0.0	\$2,666.6
188 / Otolith Thermal Mass Marking	\$0.0	\$0.0	\$48.9	\$636.7	\$85.2	\$120.0	\$141.1	\$185.2	\$0.0	\$1,031.9	\$185.2	\$1,217.1
190 / Linkage Map for the Pink Salmon Genome	\$0.0	\$0.0	\$0.0	\$0.0	\$163.0	\$254.5	\$229.4	\$212.1	\$187.3	\$646.9	\$399.4	\$1,046.3
191 / Oil-Related Embryo Mortalities	\$412.9	\$699.0	\$823.5	\$758.2	\$605.2	\$164.2	\$159.4	\$58.4	\$0.0	\$3,622.4	\$58.4	\$3,680.8

NOTES:

1. Costs are shown in thousands of dollars.
2. Figures for FY 92-97 are expenditures or obligations on restoration projects. Expenditures and obligations for FY 95-97 have been audited.
3. An additional \$6.8 million were spent on damage assessment studies in FY 92.
4. Figures for FY 98 are amounts authorized by the Trustee Council.
5. Costs projected for FY 99-02 are for planning purposes and have not yet been approved by the Trustee Council.
6. A blank space means the Trustee Council has not made a long-term funding commitment due to uncertainty about a project's future cost or scope.

DRAFT 8/7/98

Table 1, p. 1

<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
194 / Spawning Habitat Recovery	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$140.2	\$25.0	\$0.0	\$0.0	\$165.2	\$0.0	\$165.2
196 / Genetic Structure	\$0.0	\$0.0	\$180.4	\$226.7	\$173.0	\$195.3	\$130.2	\$50.0	\$0.0	\$905.6	\$50.0	\$955.6
329 / Synthesis of Toxicological Impacts	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$25.6	\$44.4	\$0.0	\$25.6	\$44.4	\$70.0
366 / Remote Video and Time-Lapse Recording	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$52.0	\$58.8	\$0.0	\$110.8	\$110.8
367 / Synthesis and Publication of Fisheries Research	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$73.1		\$0.0	\$73.1	\$73.1
476 / Effects of Oiled Incubation on Reproduction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$74.1	\$111.0	\$0.0	\$185.1	\$185.1

Herring	\$0.0	\$0.0	\$511.2	\$1,301.5	\$1,240.5	\$954.0	\$734.2	\$506.3	\$211.5	\$4,741.4	\$717.8	\$5,459.2
074 / Herring Reproductive Impairment	\$0.0	\$0.0	\$0.0	\$418.6	\$146.9	\$0.0	\$0.0	\$0.0	\$0.0	\$565.5	\$0.0	\$565.5
162 / Disease Affecting Declines	\$0.0	\$0.0	\$85.5	\$389.9	\$609.1	\$550.2	\$516.6	\$72.0	\$0.0	\$2,151.3	\$72.0	\$2,223.3
165 / Genetic Discrimination	\$0.0	\$0.0	\$6.4	\$98.3	\$96.4	\$37.7	\$56.0	\$0.0	\$0.0	\$294.8	\$0.0	\$294.8
166 / Herring Natal Habitats	\$0.0	\$0.0	\$419.3	\$394.7	\$388.1	\$366.1	\$42.3	\$0.0	\$0.0	\$1,610.5	\$0.0	\$1,610.5
311 / Productivity Dependencies: Stable Isotopes	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$119.3	\$90.0	\$0.0	\$119.3	\$90.0	\$209.3
328 / Synthesis of Impacts on Pacific Herring	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$46.1	\$0.0	\$0.0	\$46.1	\$46.1
375 / Effects of Egg Distribution and Ecology	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$76.5	\$48.2	\$0.0	\$124.7	\$124.7

NOTES:

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
462 / Effects of Disease on Population Recovery	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$75.1	\$163.3	\$0.0	\$238.4	\$238.4
468-BAA / Estimations of Acoustic Target Strength	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$146.6	\$0.0	\$0.0	\$146.6	\$146.6
SEA and Related Projects	\$0.0	\$0.0	\$5,618.5	\$4,403.9	\$5,110.3	\$3,753.0	\$2,669.6	\$1,165.0	\$132.6	\$21,555.3	\$1,297.6	\$22,852.9
195 / Pristine Monitoring in Mussels	\$0.0	\$0.0	\$0.0	\$0.0	\$99.8	\$114.5	\$114.9	\$96.7		\$329.2	\$96.7	\$425.9
297-BAA / Oceanography of PWS Bays and Fjords	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$94.2	\$0.0	\$0.0	\$94.2	\$0.0	\$94.2
320 / Sound Ecosystem Assessment (SEA)	\$0.0	\$0.0	\$5,618.5	\$4,403.9	\$5,010.5	\$3,638.5	\$2,383.4	\$851.9	\$16.1	\$21,054.8	\$868.0	\$21,922.8
340 / Long-Term Oceanographic Monitoring	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$77.1	\$91.4	\$116.5	\$77.1	\$207.9	\$285.0
393-BAA / Food Webs: Structure and Change	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$125.0		\$0.0	\$125.0	\$125.0
Sockeye Salmon	\$1,363.5	\$1,552.3	\$1,803.1	\$1,497.3	\$1,140.5	\$555.5	\$11.7	\$0.0	\$0.0	\$7,923.9	\$0.0	\$7,923.9
048-BAA / Historical Analysis of Sockeye Salmon Growth	\$0.0	\$0.0	\$0.0	\$0.0	\$106.3	\$0.0	\$0.0	\$0.0	\$0.0	\$106.3	\$0.0	\$106.3
137 / Stock ID of Chum, Sockeye, Chinook and Coho in PWS	\$310.9	\$86.0	\$188.4	\$54.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$639.3	\$0.0	\$639.3
251 / Akalura Lake Restoration	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$43.7	\$0.0	\$0.0	\$0.0	\$43.7	\$0.0	\$43.7

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254 / Delight and Desire Lakes Restoration	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$115.7	\$11.7	\$0.0	\$0.0	\$127.4	\$0.0	\$127.4
255 / Kenai River Sockeye Salmon Restoration	\$687.4	\$405.2	\$348.7	\$451.2	\$296.6	\$157.1	\$0.0	\$0.0	\$0.0	\$2,346.2	\$0.0	\$2,346.2
258 / Sockeye Salmon Overescapement	\$0.0	\$621.9	\$762.3	\$724.6	\$540.2	\$192.2	\$0.0	\$0.0	\$0.0	\$2,841.2	\$0.0	\$2,841.2
259 / Restoration of Coghill Lake Sockeye Salmon	\$0.0	\$145.1	\$240.8	\$267.5	\$197.4	\$46.8	\$0.0	\$0.0	\$0.0	\$897.6	\$0.0	\$897.6
504 / Genetic Stock ID of Kenai River Sockeye	\$310.9	\$294.1	\$262.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$867.9	\$0.0	\$867.9
R113 / Red Lake Sockeye Salmon Restoration	\$54.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$54.3	\$0.0	\$54.3

Other Fish	\$132.1	\$0.0	\$0.0	\$147.5	\$222.3	\$261.6	\$357.9	\$292.1	\$0.0	\$1,121.4	\$292.1	\$1,413.5
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043B / Cutthroat and Dolly Varden Habitat Improvement Monitoring	\$0.0	\$0.0	\$0.0	\$147.5	\$22.3	\$24.0	\$24.0	\$9.5	\$0.0	\$217.8	\$9.5	\$227.3
145 / Anadromous and Resident Forms	\$0.0	\$0.0	\$0.0	\$0.0	\$200.0	\$229.7	\$120.7	\$50.1	\$0.0	\$550.4	\$50.1	\$600.5
252 / Genetic Investigations of Rockfish and Pollock	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$209.1	\$232.5		\$209.1	\$232.5	\$441.6
302 / PWS Inventory	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$7.9	\$4.1	\$0.0	\$0.0	\$12.0	\$0.0	\$12.0
R106 / Dolly Varden Restoration	\$37.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$37.9	\$0.0	\$37.9
R90 / Dolly Varden Char Monitoring	\$94.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$94.2	\$0.0	\$94.2

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Marine Mammals	\$24.7	\$332.8	\$279.7	\$839.2	\$704.1	\$796.5	\$739.3	\$794.0	\$674.5	\$3,716.3	\$1,468.5	\$5,184.8
001 / Harbor Seal Condition and Health Status	\$0.0	\$0.0	\$0.0	\$105.4	\$135.6	\$192.0	\$51.1	\$0.0	\$0.0	\$484.1	\$0.0	\$484.1
012-BAA / Killer Whale Investigation	\$0.0	\$113.5	\$30.8	\$296.1	\$98.1	\$156.6	\$154.7	\$85.4		\$849.8	\$85.4	\$935.2
064 / Harbor Seal Monitoring, Habitat Use, Trophic Interactions	\$24.7	\$219.3	\$248.4	\$342.6	\$332.0	\$304.6	\$272.5	\$263.3	\$130.0	\$1,744.1	\$393.3	\$2,137.4
117-BAA / Harbor Seal Blubber and Lipids	\$0.0	\$0.0	\$0.0	\$95.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$95.1	\$0.0	\$95.1
170 / Isotope Ratio Studies of Marine Mammals	\$0.0	\$0.0	\$0.0	\$0.0	\$138.4	\$143.3	\$108.8	\$0.0	\$0.0	\$390.5	\$0.0	\$390.5
341 / Harbor Seals: Health and Diet	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$152.2	\$194.2	\$209.5	\$152.2	\$403.7	\$555.9
371 / Harbor Seal Metabolism/Stable Isotopes	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$110.2	\$203.4	\$0.0	\$313.6	\$313.6
425 / Marine Mammal Book Publication	\$0.0	\$0.0	\$0.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.5	\$0.0	\$0.5
441 / Harbor Seal Diet: Lipid Metabolism and Health	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$140.9	\$131.6	\$0.0	\$272.5	\$272.5
Nearshore Ecosystem	\$1,725.4	\$2,768.5	\$2,519.3	\$2,882.2	\$2,926.9	\$2,229.4	\$2,249.1	\$1,610.4	\$0.0	\$17,300.8	\$1,610.4	\$18,911.2
025 / Nearshore Vertebrate Predators (NVP)	\$0.0	\$0.0	\$0.0	\$680.8	\$1,814.4	\$1,753.4	\$1,652.9	\$500.0		\$5,901.5	\$500.0	\$6,401.5
026 / Hydrocarbon Monitoring	\$0.0	\$0.0	\$0.0	\$116.5	\$0.0	\$15.1	\$0.0	\$0.0	\$0.0	\$131.6	\$0.0	\$131.6

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027 / Kodiak Shoreline Assessment	\$0.0	\$0.0	\$0.0	\$174.5	\$40.4	\$0.0	\$0.0	\$0.0	\$0.0	\$214.9	\$0.0	\$214.9
034 / Pigeon Guillemot Recovery Monitoring	\$0.0	\$165.6	\$194.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$360.1	\$0.0	\$360.1
035 / Black Oystercatcher Recovery Monitoring	\$0.0	\$109.2	\$17.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$126.2	\$0.0	\$126.2
038 / PWS Shoreline Assessment	\$0.0	\$316.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$316.9	\$0.0	\$316.9
043 / Sea Otter Demographics and Habitat	\$0.0	\$144.0	\$123.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		\$267.9	\$0.0	\$267.9
086C / Herring Bay Experimental and Monitoring Studies	\$0.0	\$504.6	\$697.9	\$703.1	\$169.6	\$0.0	\$0.0	\$0.0	\$0.0	\$2,075.2	\$0.0	\$2,075.2
090 / Mussel Bed Restoration	\$769.3	\$331.0	\$433.6	\$455.0	\$197.6	\$8.0	\$0.0	\$150.0		\$2,194.5	\$150.0	\$2,344.5
106 / Eelgrass Monitoring	\$0.0	\$0.0	\$0.0	\$181.6	\$246.6	\$0.0	\$0.0	\$0.0	\$0.0	\$428.2	\$0.0	\$428.2
161 / Differentiation/Interchange of Harlequins	\$0.0	\$0.0	\$0.0	\$0.0	\$79.4	\$87.3	\$16.5	\$0.0	\$0.0	\$183.2	\$0.0	\$183.2
223-BAA / Publication of Sea Otter Data	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$42.8	\$0.0	\$0.0	\$0.0	\$42.8	\$0.0	\$42.8
266 / Experimental Oil Removal	\$0.0	\$0.0	\$185.8	\$143.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$329.7	\$0.0	\$329.7
285 / Subtidal Monitoring	\$0.0	\$882.8	\$581.3	\$112.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,576.8	\$0.0	\$1,576.8
289-BAA / Status of Black Oystercatchers in PWS	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$80.4	\$232.6	\$0.0	\$80.4	\$232.6	\$313.0
290 / Hydrocarbon Database	\$0.0	\$120.1	\$113.5	\$141.2	\$113.4	\$75.0	\$75.7	\$58.9		\$638.9	\$58.9	\$697.8
325-BAA / Intertidal/Subtidal Manuscript Preparation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$99.9	\$41.1	\$0.0	\$99.9	\$41.1	\$141.0
326 / Data Re-Analysis for MM6	\$0.0	\$0.0	\$0.0	\$0.0	\$11.5	\$0.0	\$0.0	\$0.0	\$0.0	\$11.5	\$0.0	\$11.5

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
348 / Response of River Otters to Oil Contamination	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$245.4	\$240.1	\$0.0	\$245.4	\$240.1	\$485.5
379 / Assessment of Risk to Residual Oil Using P450	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$121.3	\$0.0	\$0.0	\$121.3	\$121.3
423 / Population Change in Nearshore Vertebrate Predators	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$60.0		\$0.0	\$60.0	\$60.0
427 / Harlequin Duck Monitoring	\$470.5	\$194.3	\$171.8	\$172.9	\$254.0	\$247.8	\$78.3	\$0.0	\$0.0	\$1,589.6	\$0.0	\$1,589.6
432 / Effects of Oil on High Cockscomb	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$69.3		\$0.0	\$69.3	\$69.3
459 / Residual Oiling of Armored Beaches/GOA	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$124.9		\$0.0	\$124.9	\$124.9
466 / Barrow's Goldeneye Recovery Status	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$12.2		\$0.0	\$12.2	\$12.2
480 / Black Oystercatcher Abundance and Reproduction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0			\$0.0		\$0.0
R102 / Coastal Habitat Restoration	\$485.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$485.6	\$0.0	\$485.6

Seabird/Forage Fish Projects	\$743.8	\$430.2	\$1,154.5	\$2,096.2	\$2,314.8	\$2,355.6	\$2,992.1	\$2,710.5	\$1,630.3	\$12,087.2	\$4,340.8	\$16,428.0
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021 / Seasonal Movements by Common Murres	\$0.0	\$0.0	\$0.0	\$53.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$53.9	\$0.0	\$53.9
029 / Population Survey of Bald Eagles in PWS	\$0.0	\$0.0	\$0.0	\$49.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$49.3	\$0.0	\$49.3
031 / Reproductive Success of Murrelets in PWS	\$0.0	\$0.0	\$0.0	\$245.9	\$78.0	\$0.0	\$0.0	\$0.0	\$0.0	\$323.9	\$0.0	\$323.9

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038 / Symposium/Publication on Seabird Restoration	\$0.0	\$0.0	\$0.0	\$74.5	\$17.7	\$0.0	\$0.0	\$0.0	\$0.0	\$92.2	\$0.0	\$92.2
039B / Common Murre Productivity Monitoring	\$0.0	\$0.0	\$0.0	\$27.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$27.4	\$0.0	\$27.4
041 / Introduced Predator Removal	\$0.0	\$0.0	\$77.0	\$66.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$143.5	\$0.0	\$143.5
101 / Removal of Introduced Foxes from Islands	\$0.0	\$0.0	\$0.0	\$0.0	\$7.0	\$0.0	\$0.0	\$0.0	\$0.0	\$7.0	\$0.0	\$7.0
102 / Murrelet Prey and Foraging Habitat	\$428.9	\$0.0	\$239.7	\$53.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$721.7	\$0.0	\$721.7
121 / Fatty Acid Signatures of Forage Fish	\$0.0	\$0.0	\$0.0	\$33.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$33.2	\$0.0	\$33.2
142-BAA / Status and Ecology of Kittlitz's Murrelet	\$0.0	\$0.0	\$0.0	\$0.0	\$154.2	\$182.2	\$269.0	\$0.0	\$0.0	\$605.4	\$0.0	\$605.4
144 / Common Murre Population Monitoring	\$314.9	\$174.6	\$211.1	\$0.0	\$65.1	\$69.7	\$57.4	\$72.6	\$23.0	\$892.8	\$95.6	\$988.4
159 / Marine Bird Abundance Surveys	\$0.0	\$255.6	\$142.8	\$0.0	\$261.4	\$62.4	\$237.0	\$37.0		\$959.2	\$37.0	\$996.2
163 / Alaska Predator Ecosystem Experiment (APEX)	\$0.0	\$0.0	\$483.9	\$1,492.4	\$1,731.4	\$1,797.4	\$2,012.2	\$1,986.1	\$900.1	\$7,517.3	\$2,886.2	\$10,403.5
167-BAA / Curation of Seabirds Salvaged from EVOS	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$31.9	\$0.0	\$0.0	\$0.0	\$31.9	\$0.0	\$31.9
169 / Genetics of Murres, Guillemots, Murrelets	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$59.8	\$88.2	\$92.7	\$13.8	\$148.0	\$106.5	\$254.5
231 / Marbled Murrelet Productivity (in 163 after FY 97)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$119.4	\$0.0	\$0.0	\$0.0	\$119.4	\$0.0	\$119.4

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306 / Ecology and Demographics of Sand Lance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$32.8	\$32.8	\$30.0	\$20.0	\$65.6	\$50.0	\$115.6
327 / Pigeon Guillemot Research	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$123.3	\$166.1	\$262.8	\$123.3	\$428.9	\$552.2
338 / Survival of Adult Murres and Kittiwake	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$56.2	\$57.9	\$45.0	\$56.2	\$102.9	\$159.1
346 / Sand Lance Publication	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$5.4	\$10.4	\$0.0	\$5.4	\$10.4	\$15.8
347 / Fatty Acid Profile/Lipid Class Analysis	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$110.6	\$92.6	\$35.8	\$110.6	\$128.4	\$239.0
434 / East Amatuli Island Video Link	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$80.4	\$0.0	\$0.0	\$80.4	\$80.4
479 / Effects of Food Stress on Survival and Reproduction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$84.7	\$329.8	\$0.0	\$414.5	\$414.5

Archaeological Resources	\$123.3	\$1,581.9	\$234.4	\$276.3	\$449.8	\$201.8	\$206.6	\$166.7	\$0.0	\$3,074.1	\$166.7	\$3,240.8
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007A / Archaeological Index Site Monitoring	\$0.0	\$81.9	\$234.4	\$164.3	\$109.9	\$124.4	\$139.7	\$151.5		\$854.6	\$151.5	\$1,006.1
007B / Site Specific Archaeological Restoration	\$0.0	\$0.0	\$0.0	\$112.0	\$78.2	\$21.5	\$0.0	\$0.0	\$0.0	\$211.7	\$0.0	\$211.7
066 / Alutiiq Archaeological Repository	\$0.0	\$1,500.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,500.0	\$0.0	\$1,500.0
149 / Archaeological Site Stewardship	\$0.0	\$0.0	\$0.0	\$0.0	\$64.6	\$55.9	\$66.9	\$15.2	\$0.0	\$187.4	\$15.2	\$202.6
154 / Archaeological Resource Restoration Plan	\$0.0	\$0.0	\$0.0	\$0.0	\$197.1	\$0.0	\$0.0	\$0.0	\$0.0	\$197.1	\$0.0	\$197.1
R104-A / Site Stewardship	\$123.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$123.3	\$0.0	\$123.3

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
Subsistence	\$0.0	\$241.7	\$430.3	\$895.0	\$1,252.7	\$1,333.9	\$1,481.9	\$1,359.0	\$1,016.9	\$5,635.5	\$2,375.9	\$8,011.4
009D / Survey of Octopuses in Intertidal Habitats	\$0.0	\$0.0	\$0.0	\$125.0	\$141.2	\$48.0	\$0.0	\$0.0	\$0.0	\$314.2	\$0.0	\$314.2
052A / Community Involvement	\$0.0	\$0.0	\$0.0	\$79.8	\$268.9	\$248.4	\$232.1	\$243.4	\$524.0	\$829.2	\$767.4	\$1,596.6
052B / Traditional Knowledge	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$92.4	\$61.3	\$46.1		\$153.7	\$46.1	\$199.8
127 / Tatitlek Coho Salmon Release	\$0.0	\$0.0	\$0.0	\$4.8	\$24.3	\$11.1	\$10.5	\$10.7	\$0.0	\$50.7	\$10.7	\$61.4
131 / Clam Restoration	\$0.0	\$0.0	\$0.0	\$223.6	\$257.3	\$365.0	\$290.1	\$285.4	\$0.0	\$1,136.0	\$285.4	\$1,421.4
138 / Elders/Youth Conference	\$0.0	\$0.0	\$0.0	\$75.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$75.1	\$0.0	\$75.1
210 / Youth Area Watch	\$0.0	\$0.0	\$0.0	\$0.0	\$100.3	\$150.0	\$150.2	\$150.4	\$326.4	\$400.5	\$476.8	\$877.3
214 / Harbor Seal Documentary	\$0.0	\$0.0	\$0.0	\$0.0	\$72.4	\$8.1	\$0.0	\$0.0	\$0.0	\$80.5	\$0.0	\$80.5
220 / Eastern PWS Salmon Habitat Restoration	\$0.0	\$0.0	\$0.0	\$0.0	\$70.4	\$40.5	\$11.9	\$0.0	\$0.0	\$122.8	\$0.0	\$122.8
222 / Chenega Bay Salmon Habitat Enhancement	\$0.0	\$0.0	\$0.0	\$0.0	\$3.8	\$0.0	\$0.0	\$0.0	\$0.0	\$3.8	\$0.0	\$3.8
225 / Port Graham Pink Salmon Project	\$0.0	\$0.0	\$0.0	\$0.0	\$88.5	\$74.4	\$73.5	\$75.6	\$75.0	\$236.4	\$150.6	\$387.0
244 / Community Harbor Seal Sampling/Management	\$0.0	\$0.0	\$44.9	\$76.1	\$124.8	\$111.6	\$84.7	\$0.0	\$0.0	\$442.1	\$0.0	\$442.1
245 / Community-Based Harbor Seal Biosampling	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$70.7		\$0.0	\$70.7	\$70.7
247 / Kametolook River Coho Salmon	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$31.6	\$14.9	\$20.8	\$68.0	\$46.5	\$88.8	\$135.3

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
256B / Solf Lake Sockeye Salmon Stocking	\$0.0	\$0.0	\$0.0	\$0.0	\$52.0	\$34.7	\$95.5	\$68.3		\$182.2	\$68.3	\$250.5
263 / Port Graham Salmon Stream Enhancement	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$58.0	\$107.0	\$42.1	\$23.5	\$165.0	\$65.6	\$230.6
272 / Chenega Chinook Release Program	\$0.0	\$10.7	\$55.4	\$43.4	\$48.8	\$44.3	\$0.0	\$0.0	\$0.0	\$202.6	\$0.0	\$202.6
273 / Surf Scoter Life History and Ecology	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$170.4	\$206.2		\$170.4	\$206.2	\$376.6
274 / Herring/Nearshore Documentary	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$89.6	\$0.0	\$0.0	\$89.6	\$0.0	\$89.6
279 / Food Safety Testing	\$0.0	\$231.0	\$272.1	\$173.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$676.8	\$0.0	\$676.8
286 / Elders/Youth Conference	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$15.8	\$90.2	\$0.0	\$0.0	\$106.0	\$0.0	\$106.0
401 / Spot Shrimp Population	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$70.1		\$0.0	\$70.1	\$70.1
428 / Community Planning Project	\$0.0	\$0.0	\$57.9	\$93.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$151.4	\$0.0	\$151.4
444 / Community-Based Harbor Seal Research	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$69.2	\$0.0	\$0.0	\$69.2	\$69.2
Recreation	\$0.0	\$40.8	\$75.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$115.8	\$0.0	\$115.8
065 / Prince William Sound Recreation Project	\$0.0	\$40.8	\$75.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$115.8	\$0.0	\$115.8
Reduction of Marine Pollution	\$0.0	\$0.0	\$0.0	\$260.8	\$48.4	\$267.5	\$0.0	\$54.5	\$0.0	\$576.7	\$54.5	\$631.2
115 / Sound Waste Management	\$0.0	\$0.0	\$0.0	\$260.8	\$48.4	\$0.0	\$0.0	\$0.0	\$0.0	\$309.2	\$0.0	\$309.2

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
304 / Kodiak Waste Management	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$267.5	\$0.0	\$0.0	\$0.0	\$267.5	\$0.0	\$267.5
514 / Lower Cook Inlet Waste Management Plan	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$54.5		\$0.0	\$54.5	\$54.5

Habitat Improvement	\$0.0	\$0.0	\$0.0	\$108.2	\$479.8	\$664.8	\$631.1	\$466.3	\$0.0	\$1,883.9	\$466.3	\$2,350.2
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058 / Landowner Assistance	\$0.0	\$0.0	\$0.0	\$90.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$90.7	\$0.0	\$90.7
060 / Spruce Bark Beetle Impacts	\$0.0	\$0.0	\$0.0	\$17.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$17.5	\$0.0	\$17.5
180 / Kenai Habitat Restoration	\$0.0	\$0.0	\$0.0	\$0.0	\$479.8	\$599.4	\$491.9	\$299.6		\$1,571.1	\$299.6	\$1,870.7
230 / Valdez Duck Flats Restoration	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$65.4	\$0.0	\$0.0	\$0.0	\$65.4	\$0.0	\$65.4
314 / Homer Mariner Park	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$99.5	\$0.0	\$0.0	\$99.5	\$99.5
339 / Western PWS Human Use and Wildlife Disturbance Model	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$139.2	\$67.2	\$0.0	\$139.2	\$67.2	\$206.4

Habitat Protection	\$633.0	\$1,102.9	\$851.1	\$150.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,737.1	\$0.0	\$2,737.1
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051 / Habitat Assessments	\$633.0	\$946.1	\$413.2	\$15.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,008.0	\$0.0	\$2,008.0
059 / Habitat Identification Workshop	\$0.0	\$23.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$23.1	\$0.0	\$23.1
060 / Accelerated Data Acquisition	\$0.0	\$43.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$43.9	\$0.0	\$43.9
064 / Imminent Threat Habitat Protection	\$0.0	\$89.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$89.8	\$0.0	\$89.8
110 / Habitat Data Acquisition and Support	\$0.0	\$0.0	\$437.9	\$134.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$572.3	\$0.0	\$572.3

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
Ecosystem Synthesis	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$55.4	\$261.1	\$916.7	\$35.0	\$316.5	\$951.7	\$1,268.2
278 / Kachemak Bay Ecological Characterization	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$70.0	\$35.0	\$0.0	\$105.0	\$105.0
300 / Synthesis of Scientific Findings from EVOS	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$55.4	\$81.3	\$80.3	\$0.0	\$136.7	\$80.3	\$217.0
330-BAA / Mass-Balance Model of Trophic Fluxes	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$179.8	\$149.8	\$0.0	\$179.8	\$149.8	\$329.6
360-BAA / Guidance for Future EVOS Activities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$194.4		\$0.0	\$194.4	\$194.4
368 / Environmentally Sensitive Areas: Summary Maps	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$37.3	\$0.0	\$0.0	\$37.3	\$37.3
391 / Information Management/Monitoring System	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$335.0	\$0.0	\$0.0	\$335.0	\$335.0
455 / Investigation of Data System for Long-Term Monitoring	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$49.9	\$0.0	\$0.0	\$49.9	\$49.9
Admin./Sci. Mgmt./Pub. Info.	\$0.0	\$0.0	\$69.4	\$0.0	\$35.0	\$0.0	\$0.0	\$347.0	\$0.0	\$104.4	\$347.0	\$451.4
470 / 10 Years After <i>Exxon Valdez</i>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$152.0	\$0.0	\$0.0	\$152.0	\$152.0
471 / Updating the Status of Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$195.0	\$0.0	\$0.0	\$195.0	\$195.0
507 / EVOS Symposium Publication	\$0.0	\$0.0	\$69.4	\$0.0	\$35.0	\$0.0	\$0.0	\$0.0	\$0.0	\$104.4	\$0.0	\$104.4

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<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
Project Management	\$0.0	\$0.0	\$0.0	\$0.0	\$94.4	\$572.6	\$560.1	\$454.2	\$0.0	\$1,227.1	\$454.2	\$1,681.3
250 / Project Management	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$572.6	\$560.1	\$454.2		\$1,132.7	\$454.2	\$1,586.9
600 / NOAA Program Management	\$0.0	\$0.0	\$0.0	\$0.0	\$94.4	\$0.0	\$0.0	\$0.0	\$0.0	\$94.4	\$0.0	\$94.4
Total Cost :	\$6,580.5	\$8,898.7	\$15,059.1	\$17,175.1	\$17,921.3	\$15,807.7	\$14,097.0	\$11,677.8	\$4,119.9	\$95,539.4	\$15,797.7	\$111,337.1

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Table 2. History of Project Costs / Projects Outside FY 99 Work Plan

<u>Project</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00-02</u>	<u>Subtotal FY92-98</u>	<u>Subtotal FY99-02</u>	<u>Total FY92-02</u>
100 / Administration, Science Management, Public Information	\$4,295.9	\$2,653.9	\$4,013.1	\$3,024.1	\$2,995.6	\$2,650.9	\$2,796.3	\$2,495.7		\$22,429.8	\$2,495.7	\$24,925.5
115 / Sound Waste Management	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,138.8	\$0.0	\$0.0	\$0.0	\$1,138.8	\$0.0	\$1,138.8
126 / Habitat Prot./Acq. Support	\$0.0	\$0.0	\$822.9	\$2,176.5	\$1,967.1	\$840.2	\$851.4	\$756.7		\$6,658.1	\$756.7	\$7,414.8
197 / SeaLife Center Fish Pass	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$535.9	\$0.0	\$0.0	\$0.0	\$535.9	\$0.0	\$535.9
291 / Chenega Area Shoreline Residual Oiling Reduction	\$0.0	\$0.0	\$0.0	\$0.0	\$3.0	\$1,800.2	\$182.0	\$0.0	\$0.0	\$1,985.2	\$0.0	\$1,985.2
304 / Kodiak Waste Management	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,857.1	\$0.0	\$0.0	\$1,857.1	\$1,857.1
405 / Port Graham Hatchery Reconstruction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$777.5	\$0.0	\$0.0	\$777.5	\$777.5
424 / Restoration Reserve	\$0.0	\$0.0	\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$36,000.0	\$60,000.0	\$48,000.0	\$108,000.0
Total Cost :										\$92,747.8	\$53,887.0	\$146,634.8

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SEA BUDGET (Project 99320)
August 11, 1998

<u>Project No.</u>	<u>Title</u>	<u>PI (Agency)</u>	<u>FY 94</u>	<u>FY 95</u>	<u>FY 96</u>	<u>FY 97</u>	<u>FY 98</u>	<u>FY 99</u>
320A	Salmon growth and mortality	M. Willette (ADFG)	\$225.5	\$257.9	\$0.0	\$0.0	\$0.0	\$0.0
320E	Salmon predation	M. Willette (ADFG)	\$750.8	\$864.8	\$568.4	\$591.6	\$320.1	\$91.7
320F	Harbor seals/trophic interactions	K. Frost (ADFG)	\$13.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
320G	Phytoplankton and nutrients	P. McRoy (UAF)	\$141.3	\$233.5	\$161.0	\$129.9	\$106.7	\$74.9
320H	Role of zooplankton	T. Cooney (UAF)	\$299.6	\$243.0	\$327.4	\$136.4	\$106.1	\$54.8
320I	Stable isotopes	T. Kline (PWSSC)	\$60.6	\$227.8	\$264.3	\$124.6	\$132.4	\$0.0
320J	Information systems/modeling	V. Patrick (PWSSC)	\$727.1	\$823.1	\$737.4	\$565.1	\$460.6	\$0.0
320K	Fry release	E. Prestegard (PWSAC)	\$1.7	\$46.4	\$52.7	\$22.5	\$0.0	\$0.0
320L	Experimental manipulation	PWSSC	\$1,856.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
320M	Physical oceanography	S. Vaughn (PWSSC)	\$777.1	\$609.0	\$634.4	\$355.4	\$133.0	\$62.5
320N	Nekton and plankton acoustics	G. Thomas (PWSSC)	\$529.9	\$630.6	\$584.0	\$366.9	\$171.6	\$51.1
320Q	Avian predation on herring spawn	M. Bishop (USFS)	\$85.0	\$99.0	\$40.3	\$0.0	\$0.0	\$11.3
320R	Trophodynamic modeling	D. Eslinger (UAF)	\$0.0	\$0.0	\$202.8	\$182.0	\$160.5	\$74.9
320T	Juvenile herring growth & habitats	B. Norcross (UAF)	\$0.0	\$334.2	\$1,169.0	\$948.3	\$546.7	\$160.5
320T-Supp	Herring TEK	B. Norcross (UAF)	\$0.0	\$0.0	\$0.0	\$0.0	\$75.9	\$25.1
320U	Somatic energetics	A.J. Paul (UAF)	\$0.0	\$98.4	\$189.2	\$154.4	\$105.8	\$74.9

SEA BUDGET (Project 99320)
August 11, 1998

320Y	Predation rates on hatchery fry	D. Scheel (PWSSC)	\$0.0	\$49.8	\$33.9	\$0.0	\$0.0	\$10.7
320Z1	Synthesis/integration	T.Cooney (UAF)	\$0.0	\$0.0	\$45.5	\$61.3	\$64.0	\$159.5
			\$5,618.5	\$4,403.9	\$5,010.5	\$3,638.5	\$2,383.4	\$851.9

NOTE: FY 94-FY 97 are amounts expended or obligated, as reported in the 3/31/98 quarterly report.
FY 98 are amounts authorized. FY 99 are amounts recommended.

APEX BUDGET (Project 99163)
August 11, 1998

Project Number	Title	Investigator(s) (Agency)	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
98163 A	Forage Fish Assessment	Lew Haldorson and Tom Shirley (UAF)	483.9	531.2	410.5	413.2	268.7	272.4
99163 B	Bird/Fish Interaction	Bill Ostrand (USFWS)	-----	79.8	131.5	118.7	89.9	120.9
98163 C	Fish Diet Overlap	Molly Sturdevant (NOAA)	-----	35.9	58.8	86.9	29.9	0.0
96163 D	Puffins as Samplers	John Piatt (NBS)	-----	39.2	11.5	0.0	0.0	0.0
99163 E	Black-legged Kittiwakes	Dave Irons and Rob Suryan (USFWS)	-----	112.1	164.6	170.7	242.1	246.8
99163 F	Pigeon Guillemots	Greg Golet (USFWS)	-----	125.0	151.9	134.2	127.9	188.5
99163 G	Energetics	Dan Roby and Jill Anthony (OSU)	-----	160.0	167.1	169.9	221.3	179.1
97163 H	Proximate Composition	Graham Worthy (TA&M)	-----	0.0	0.0	0	0.0	0.0
99163 I	Project Leader	Dave Duffy (UAA)	-----	130.1	182.6	138.4	160.6	98.8

NOTE: FY 94-FY 97 are amounts expended or obligated, as reported in the 3/31/98 quarterly report. FY 98 are amounts authorized. FY 99 are amounts recommended.

APEX BUDGET (Project 99163)
August 11, 1998

Project Number	Title	Investigator(s) (Agency)	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
99163 J	Barren Is. Murres & Kittiwakes	Dave Roseneau and Art Kettle (USFWS)	-----	29.2	99.3	108.9	112.5	115.7
99163 K	Fish as Samplers	Dave Roseneau (FWS)	-----	14.0	4.4	9.2	9.6	12.0
99163 L	Historical Data Review	Paul Anderson (NOAA) John Piatt (NBS) Jim Blackburn (F&G) Bill Bechtol (F&G)	-----	53.7	71.8	82.6	NBS 24.8 NOAA 31.6 <u>ADFG 29.1</u> 35.0 total 91.4	NBS 22.8 NOAA 38.3 <u>ADFG 29.1</u> total 90.2
99163 M	Lower Cook Inlet	John Piatt (NBS)	-----	-----	215.4	243.2	267.7	267.7
98163 N	Kittiwake Feeding Exp.	Marc Romano and John Piatt (NBS)	-----	-----	20.0	30.1	30.0	0.0
99163 O	Statistical Review	Lyman McDonald (WET)	-----	-----	21.2	21.3	21.4	32.1
96163 P	Sand Lance HC Exposure	Jack Anderson (CAS)	-----	-----	20.9	0.0	0.0	0.0
99163 Q was 97253	APEX Modeling	Dave Ainley (HTH&A) Glenn Ford (ECI) Dave Schneider (MUN)	-----	-----	-----	69.2	71.9	72.2

NOTE: FY 94-FY 97 are amounts expended or obligated, as reported in the 3/31/98 quarterly report. FY 98 are amounts authorized. FY 99 are amounts recommended.

APEX BUDGET (Project 99163)
August 11, 1998

Project Number	Title	Investigator(s) (Agency)	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
99163R was 98231	Marbled Murrelets	Kathy Kuletz (FWS)	-----	-----	-----	-----	112.7	114.7
99163S	Jellies	Jenny Purcell (UM)	-----	-----	-----	-----	96.5	116.8
99163T	Aerial Surveys	Evelyn Brown (UAF) Glenn Ford (ECI)	-----	-----	-----	-----	58.2	58.2
95163	Abundance Distribution		-----	128.3	-----	-----	-----	-----
TOTALS			\$ 483.9	\$1,492.4	\$1,731.4	\$1,797.4	\$2,012.2	\$1,986.1

NOTE: FY 94-FY 97 are amounts expended or obligated, as reported in the 3/31/98 quarterly report. FY 98 are amounts authorized.
FY 99 are amounts recommended.

NVP BUDGET (Project 99025)

Aug. 11, 1998

NOTE: This budget breakdown was prepared by Restoration Office staff and is a rough approximation of the amount of funding allocated to each project component – the DPD and detailed budget present this project as an integrated whole, not as subprojects.

<u>Project Component</u>	<u>PI (Agency)</u>	<u>Approximate FY98</u>	<u>Approximate FY99</u>
Sea otter	Jim Bodkin & Brenda Ballachey (USGS/DOI)	\$247.7	\$61.0
River otter & pigeon guillemot	L. Duffy, Terry Bowyer (UAF)	\$238.8	\$76.6
Harlequin duck	Dan Esler (USGS/DOI)	\$196.2	\$69.8
Clams	Glenn VanBlaricom (UW) & Steve Jewett (UAF)	\$349.9	\$54.5
Mussels	Chuck O'Clair (NOAA)	\$162.4	\$49.0
Sea urchins	Tom Dean (CRA, Inc.)	\$155.0	\$89.0
Avian copredators	MaryAnn Bishop (USFS)	\$28.5	\$0.0
Project leadership/boat charters	Leslie Holland-Bartels (USGS/DOI)	\$254.4	\$100.1
		<hr/>	
		\$1,652.9	\$500.0

NVP Funding History:

FY 95:	\$ 710.4
FY 96:	\$1,818.3
FY 97:	\$1,753.4
FY 98 Authorized:	\$1,652.9
FY 99 Request:	<u>\$ 500.0</u>
Total	\$6,435.0

**Miscellaneous
Correspondence**



11.09.07

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax: 907/276-7178



July 28, 1998

Mr. Martin Maines
General Delivery
Cordova, Alaska 99574

Dear Mr. Maines:

Thank you for your recent letter regarding the Trustee Council's habitat protection program and your interest in protecting habitat values in the eastern Copper River delta region. As you are aware, the lands in question are outside of the spill-impacted area.

Under the terms of the court-approved settlement administered by the Trustee Council, funds must be used for the restoration of resources and services that were injured by the *Exxon Valdez* oil spill. The Trustee Council undertook an extensive public involvement process over the course of several years to develop a *Restoration Plan* that was finally approved in 1994. This process, which involved a full Environmental Impact Statement (EIS), included a geographic definition of the spill-impact region. As you are no doubt aware, the oil spill at Bligh Reef spread west and south across Prince William and then out along the southern Kenai Peninsula and further west. There was no oil spilled in the eastern Copper River-Bering River region. (A copy of the *Restoration Plan* is enclosed for your reference.)

Public involvement during development of the *Restoration Plan* generated an enormous volume of public comment. One of the issues posed for public consideration was whether restoration actions should take place in the spill area only or include areas outside the spill region. Roughly two-thirds of all those who commented on this issue favored limiting restoration actions to the spill area. Support for this view was even stronger within the spill area where three-quarters of those who commented indicated that they wanted to see restoration actions limited to the spill-area.

In the *Restoration Plan* a formal policy was included regarding the location of restoration actions: "Restoration activities will occur primarily within the spill area. Limited restoration activities outside the spill area, but within Alaska, may be considered under the following conditions: when *the most effective restoration actions for an injured population* are in a part of its range outside the spill area; or when the information acquired from *research and monitoring activities* outside the spill area will be significant for restoration or understanding injuries within the spill area." (*Restoration Plan*, p. 14, emphasis added.) To date, the Trustee Council has not authorized the purchase of any lands outside the spill area. In response to public comment urging consideration of protecting lands in the eastern Copper River Delta, however, the U.S. Forest Service, as an individual agency and the principal public land manager for the region, has indicated a willingness to further examine this issue.

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Alaska Department of Law

Finally, it is important to make clear that the Trustee Council can only work with *willing sellers* of land. The Chugach Alaska Corporation (CAC) has very strongly indicated that it does *not* want to sell any of its lands. That is, even if the spill area boundaries did include the eastern Copper River-Bering River lands in question, CAC has made it very clear that they are not interested in participating in the Trustee Council's habitat protection program.

Again, thank you for providing your comment. Please know that a copy of your letter will be provided to each of the Trustee Council members.

Sincerely,

A handwritten signature in black ink, reading "Molly McCammon". The signature is fluid and cursive, with the first name "Molly" and last name "McCammon" clearly distinguishable.

Molly McCammon
Executive Director

enclosure

cc: Jim Wolfe

Post-It™ Fax Note	7671	Date	8-12	# of pages	4
To	EVOS Council	From	G. BAKER		
Co./Dept.		Co.			
Phone #		Phone #	786-1056		
Fax #	276-7178	Fax #			

Grant C. Baker
P.O. Box 240986
Anchorage, Alaska 99524

August 12, 1998

EVOS Trustee Council and PAG
645 G. Street, Suite 401
Anchorage, Alaska 99501
(907) 276-7178 (fax)

RE: Support for creating a University of Alaska endowment with the EVOS Restoration Reserve

Dear Trustee Council and PAG:

I was able to attend the July 28, 1998 PAG meeting that addressed the EVOS Restoration Reserve. It was good to hear the ideas and concerns of the PAG. I would like to provide my continued support for creating a University of Alaska endowment with the EVOS Restoration Reserve. Also, there were a few issues that were raised at the meeting that I would like to address in this letter.

One question was what would be an appropriate amount for a University endowment. It is my recommendation that the endowment be in the \$75 million to \$100 million range of the remaining \$150 million Reserve. This would enable a practical endowment to be created that would allow needed restoration work to be performed in perpetuity. Also, there would be enough funds remaining to meet most of the other requested uses for the Reserve.

For example, if \$75 million was used for a University endowment, there would still be enough for a 'small parcel purchasing' program. A small parcel program endowed for about \$25 million would enable about \$1 million (and more as the fund grows) to be used each year to purchase land parcels as they are identified as being needed. Another \$50 million would be available to implement the other requested items.

In other words, pretty much everything that has been requested for the Reserve could be done including a substantial endowment for the University. This point was made by one of the PAG members and seemed to be in agreement with several of the other PAG members.

One of the best recognized benefits of a University endowment is that it meshes very well with the needs of the EVOS Trustee Council and the purpose of the Spill funds. An endowment can support research to determine what is wrong, how to fix it, and implement the fix. In addition, there seemed to be a common agreement that natural resource managers will be needed to oversee the newly acquired properties, as well as the actual Spill damaged areas. Specialized land managers for Spill damaged lands is something that a University endowment can produce. In addition, educational and public awareness programs and materials about the Spill can be produced. The knowledge and processes developed by the University for restoration can be displayed at the Seward SeaLife Center (and elsewhere) which would be of great interest to the

public and enhance the Center. Finally, processes developed for restoration and preservation may be marketed worldwide to create income for the University and to perpetuate restoration work in individual communities affected by the Spill.

The word 'research' seems to suffer from the misconception that it is only 'test tubes' and 'monitoring'. Many are put off by the idea of an 'endowment for research' since it is thought of as not including restoration type work or would not produce some type of real and practical results. However, I am finding that when it is explained that *research is meant to be much more*, such as those things described above, then these concerns transform into strong support for an endowment. I thought I would pass this along since it could help in your discussions.

What is of foremost concern is that the Trustee Council might not make an endowment at all. This is especially troublesome since Prince William Sound (PWS) and other Spill damaged areas are known to have not recovered. Many species such as shrimp, herring, and some salmon species are still very depressed or are very sporadic. In fact, a news story televised last night and this morning reported on the depressed levels of sea otters in PWS that are not recovering as expected, and are showing signs of contamination.

The Trustee Council should very careful to not mistakenly believe that everything in PWS is 'okay'. Rumors that shrimp stocks were 'depressed' before the spill, and therefore shrimp should be ignored, are misleading. Records will show that after the Spill, shrimp fishing in PWS has been virtually eliminated. Shrimp fishermen that fished for 30 years stopped fishing a few years after the Spill. That is an indicator of a Spill-caused problem that should not be ignored. The natural red salmon run to Eshamy Bay of PWS has also been very erratic. Fish and Game has essentially given up trying to figure out the problem and did not even install the Eshamy Lake weir this year. PWS herring stocks are depressed and have also suffered genetic problems. These are indicators that PWS continues to have problems.

A former Executive Director for the Trustee Council, James R. Ayers, may have summarized it best when he described a main problem from the Spill as being subsurface oiling which is a long-term problem. More than four years after the Spill, in a December 18, 1993 letter-to-the-editor, Mr. Ayers wrote:

"A greater concern to the Trustee Council is subsurface oiling, which is probably more prevalent now than surface oil residue in the spill area. Subsurface patches are scattered around the area and range in size from a few square meters to several thousand square meters, such oiling has decreased area-wide by about 45 percent since a 1991 survey. Did all of this oil come from some other source long ago? Not likely.

.....

State and federal researchers visited 59 study sites in western Prince William Sound this summer, traveling from the northern islands to the southwest entrance where the sound meets the Gulf of Alaska. Oil was present, in some amount, at every site.

.....

A large oil spill does not just go away. High oil concentrations in sediments and mussels continue to be found in the western part of the sound."

--December 18, 1993 Fairbanks Daily News-Miner, "Spill damage lingers".

I have attached Mr. Ayers' complete letter for your convenience.

Restoration from oil damage depends on EVOS funds being wisely spent to create a long-term program that identifies the problems, develops solutions, and fixes the problems. Fortunately, the main mission and purpose of the EVOS funds were to restore and protect Oil Damaged Areas from oil damage. For PWS, recovery has not occurred yet. It would be a shame if the remaining EVOS funds were spent without restoring PWS while knowing it has not recovered.

A survey taken by the EVOS Trustee Council in 1993 showed that 2/3rds of the responses favored placing a fairly large portion of the settlement into an endowment. The recommended amount from that survey was between \$200 to \$400 million of the \$900 million EVOS settlement. A similar EVOS survey was taken recently and produced strong support from the Spill damaged areas for an endowment. So, a \$75 to \$100 million University endowment is a compromise and reasonable in light of the remaining funds and public support from Alaskans.

There seems to be strong public support for creating a University endowment in addition to the EVOS surveys. For example, when the Anchorage Assembly recently passed its Resolution supporting a University endowment, many of the members requested that they be added as co-sponsors. As Assembly members, these individuals represent the people of Anchorage.

In summary, a University endowment meshes very well with the needs of the Trustee Council and satisfies the request of the public to create an endowment. To meet the identified needs, I recommend an amount between \$75 to \$100 million. No endowment would certainly be a loss for the Trustee Council, the University, the public, and the recovering Spill damaged areas.

I urge the Trustee Council to do what is necessary to establish an endowment at the University of Alaska. As a cooperative effort between the University and the Trustee Council, a customized endowment can be constructed to superbly address the needs of the Trustee Council and fulfill the purpose of the EVOS settlement funds.

Sincerely,



Dr. Grant C. Baker

Assistant Professor Civil Engineering

University of Alaska Anchorage

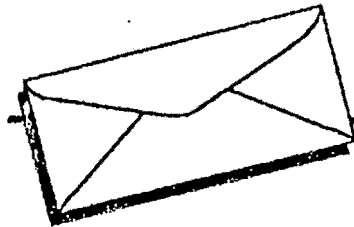
Tele: (907) 786-1056 (wk)

Fax: (907) 786-1079 (fax)

Email: afgcb@uaa.alaska.edu

Attachment: December 18, 1993 letter from Trustee Council Executive Director

Fairbanks Daily News-Miner
December 18, 1993



LETTERS TO THE EDITOR

Spill damage lingers

Dec. 10, 1993

To the editor:

The most recent and comprehensive field survey of western Prince William Sound took place this summer. A draft report on the findings was released Nov. 30 at a meeting of the Exxon Valdez Trustee Council in Anchorage, Alaska. While I read with interest Agis Salpukas' report of Dr. Keith Kvenvolden's study of asphalts found on some shorelines (New York Times, Dec. 1), I would caution readers against using the article to form generalizations about conditions in the area affected by the 1989 Exxon Valdez oil spill. Let me be clear—based on our staff's studies, I strongly disagree with Kvenvolden's principal conclusion that oiling residue from other sources is more common than Exxon Valdez Oil.

Kvenvolden's findings only apply to a single type of oil residue: har-

dened, weathered tar and asphalt. Even on the surface, the oiling types and consistencies we still find vary, from Kvenvolden's asphalts to greasy brown "syrup," less viscous emulsions, and even sheening. Fortunately, cleanup efforts and natural forces have combined to remove most of the oil from the surface.

A greater concern to the Trustee Council is subsurface oiling, which is probably more prevalent now than surface oil residue in the spill area. Subsurface oiling patches are scattered around the area and range in size from a few square meters to several thousand square meters, such oiling has decreased area-wide by about 45 percent since a 1991 survey. Did all this oil come from some other source from long ago? Not likely.

State and federal researchers visited 59 study sites in western Prince William Sound this summer, traveling from the northern islands to the southwest entrance where the sound meets the Gulf of Alaska. Oil was present, in some amount, at every site. More importantly, study of those sites began in

1989, after the spill, when some of the same government researchers documented heavy, viscous oil coming ashore. They were sampled and "fingerprinted" chemically as Exxon's Alaska North Slope crude in 1989, then tracked yearly right through the summer of 1993. Scientists at the National Oceanic and Atmospheric Administration have analyzed several thousand samples collected in the spill path over the last four years; Kvenvolden reports his results based on analysis of only 21 samples from the oiled region.

A large oil spill does not just go away. High oil concentrations in sediments and mussels continue to be found in the western part of the sound. The effects of these residues on wildlife and fishery resources continue to be assessed.

As scientists and public resource managers, we feel it is important that the owners of these resources—America's citizens—understand the complexity of the situation and have the opportunity to guide our efforts. They need complete information to do that. Thank you for the opportunity to

comment on this subject.
Sincerely yours,
James R. Ayers
Executive Director
Exxon Valdez Oil Spill
Trustee Council
Anchorage



Alaska State Legislature Written Testimony Form

Please enter into the record my testimony to the EVOS Trustee Council Committee on
Public Comment (Committee Name)
dated 8/13/98
(bill/subj)

My name is Sierra Drake, and I own the Chugach National Forest. I am writing to urge the EVOS Trustee Council to extend the current restoration boundary to include the east Delta and the Bering Coal Fields. Resource extraction in the Carbon Mountain Region will degrade the Chugach National Forest, part of which is included in the current spillzone. The current boundary is political, not scientific. Oil travels in water and water is contained in watersheds. Part of the Copper River watershed is included in the boundary, which almost touches the Copper River on its west side. If part of the watershed was affected, all of it was. A river cannot be a scientific boundary because a river is the heart of a watershed. Ecosystem based boundaries are set on ~~high~~ high points such as ridges, not low points such as rivers.

A Chugach Alaska Corp. attorney claimed the land was not for sale. The timber, oil, and coal are for sale. What part of the land isn't? Native people should keep the deed, and EVOS should ~~not protect the public interest~~ protect the public interest and habitat, not corporate profits which CAC seems to mistake for private land. It is not EVOS's responsibility to protect private land or corporate profit, but rather habitat.

Testifier Signature

Representing: (Optional)

the public interest

Address

PO Box 1464 Cordova AK 99574

Phone Number

(907) 424-5890

Please notify me of public hearings.



Alaska State Legislature Written Testimony Form

Please enter into the record my testimony to the EVDS trustee council Committee on
~~8/13/98~~ dated 8/13/98 (Committee Name)
(bill/subj)

The attorney for the Chugach Alaska Corporation stated that the land is not for sale. What is meant by "the land". The corporation is in the process of putting in a road over 100 salmon spawning streams in order to further ~~desecrate~~ the streams and "the land" by clearcutting. They want to make money by selling timber. Are the trees not a part of "the land"? The ~~road~~ Carbon Mountain Project would also open up "the land" for mining and oil drilling. Are the minerals and oil not a part of "the land"? (cont'd pg. 2)

Testifier Signature Ruth Kapel

Representing: (Optional)

Address

Phone Number

POB 1464, Cordova AK
(907) 424 - 4934

The land seems to be for sale for exploitation and extraction purposes, but not for preservation and protection. ~~We must~~

We must protect this sacred land. There is no place like this on earth. No place seems to be as wild and as able to support and provide habitat for the many endangered species that reside here.

This ecosystem has been affected by EVOS and as the trustee council you have the responsibility to extend the boundary to protect the entire Copper River Delta. Just as the water forms veins that connect and reconnect, the entire ecosystem is heavily inter connected. We cannot protect a small piece. We must protect the entire Copper River Delta from further

7/22/98

Dear Mrs. Molly McCammon,

I am writing to you in regards to the Carbon Mountain logging project, planned for the near future. I am a local Cordovan fisherman and I protest the clear cutting of such land. I also protest the construction of the 29 mile road that the Chugatch Alaskan Corp. wants to construct in order to extract their timber. The Copper River is one of the biggest spawning grounds for natural wild salmon in the region. The proposed road would cross over 200 streams, over 100 of them are natural salmon spawning streams. Such a road threatens my livelihood, since I make my living from the hope that these fish return to the Copper River every year. If the ecosystem of these fish is destroyed they will not spawn. I am pleading you and your council to extend your political restoration boundary to include the Bering River region. That way your council can purchase the surface and or subsurface rights from the Chugatch Alaskan Corp. This will

RECEIVED

JUL 27 1998

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

~~and~~ stop the construction of this hideous road, and the clear cutting of our rainforests. I hope you understand my concern, and I only hope that you think seriously about my proposition. At any rate your comitte and the fund you were granted by Exxon, whole purpose is to restore, study, and protect the natural ecosystems of this area. Here is your chance to do something, so please act on it.

Thankyou.

Sincerely.

Martin J. Maines.



RECEIVED

JUL 27 1998

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

M. Maines
General Deliv.
Cordova AK.
99574

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178



July 28, 1998

The Honorable Ted Stevens
United States Senate
522 Hart Building
Washington, D.C. 20510-0201

Dear Senator Stevens:

The purpose of this letter is to encourage your assistance with efforts to enact legislation through Congress that will enable the *Exxon Valdez* Oil Spill Trustee Council to minimize management fees and maximize net returns on the civil settlement funds.

As members of the Public Advisory Group, we have long recognized the need to secure legislative changes that would permit settlement funds to be withdrawn from the Court Registry Investment System and invested in a manner that will provide higher returns than is presently possible. Further, investing the settlement funds outside of the Court System should substantially reduce fees thus also allowing for more productive use of settlement funds for restoration purposes. As you know, action is needed by Congress to achieve this goal and the PAG strongly encourages your support of this effort.

Trustee Council staff, with support from the PAG, has been working on this issue for some time and we are hopeful that authorizing legislation will soon be enacted. At the same time, we are aware that there is a wide spectrum of views regarding how civil settlement funds should be used. Over several years, the PAG itself has struggled with this same issue. As representatives of diverse interests, we often find that our priorities differ when it comes to restoration funding decisions. However, we feel that the process established under the settlement has been a fair one that allows for a healthy debate and balanced decision making.

Please know that the PAG considers obtaining legislative authority to move funds out of the Court System in order to enhance returns and reduce fees as an essential priority. As you further consider this issue, we are hopeful that you will be able to work with the Trustee Council and its staff to come to common agreement regarding language in the authorizing legislation that will be acceptable to all parties while maintaining the integrity of the settlement and continued public involvement in the decision-making process.

Thank you for your consideration of this matter.

Sincerely,

Rupert Andrews, Chair
Public Advisory Group
Exxon Valdez Oil Spill Trustee Council

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National Oceanic and Atmospheric Administration

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Alaska Department of Law

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178



July 28, 1998

The Honorable Frank H. Murkowski
United States Senate
706 Hart Building
Washington, D.C. 20510-0202

Dear Senator Murkowski:

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Thank you for your consideration of this matter.

Sincerely,

Rupert Andrews, Chair
Public Advisory Group
Exxon Valdez Oil Spill Trustee Council

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National Oceanic and Atmospheric Administration

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Alaska Department of Law

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178



July 28, 1998

The Honorable Donald E. Young
United States Congress
2111 Rayburn Building
Washington, D.C. 20515-0201

Dear Congressman Young:

The purpose of this letter is to encourage your assistance with efforts to enact legislation through Congress that will enable the *Exxon Valdez* Oil Spill Trustee Council to minimize management fees and maximize net returns on the civil settlement funds.

As members of the Public Advisory Group, we have long recognized the need to secure legislative changes that would permit settlement funds to be withdrawn from the Court Registry Investment System and invested in a manner that will provide higher returns than is presently possible. Further, investing the settlement funds outside of the Court System should substantially reduce fees thus also allowing for more productive use of settlement funds for restoration purposes. As you know, action is needed by Congress to achieve this goal and the PAG strongly encourages your support of this effort.

Trustee Council staff, with support from the PAG, has been working on this issue for some time and we are hopeful that authorizing legislation will soon be enacted. At the same time, we are aware that there is a wide spectrum of views regarding how civil settlement funds should be used. Over several years, the PAG itself has struggled with this same issue. As representatives of diverse interests, we often find that our priorities differ when it comes to restoration funding decisions. However, we feel that the process established under the settlement has been a fair one that allows for a healthy debate and balanced decision making.

Please know that the PAG considers obtaining legislative authority to move funds out of the Court System in order to enhance returns and reduce fees as an essential priority. As you further consider this issue, we are hopeful that you will be able to work with the Trustee Council and its staff to come to common agreement regarding language in the authorizing legislation that will be acceptable to all parties while maintaining the integrity of the settlement and continued public involvement in the decision-making process.

Thank you for your consideration of this matter.

Sincerely,

Rupert Andrews, Chair
Public Advisory Group
Exxon Valdez Oil Spill Trustee Council

Federal Trustees

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

State Trustees

Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

July 13, 1998

Anchorage Assembly

E-mail: wwmas@ci.anchorage.ak.us

Fax: 343-4780

Dear Assembly:

A rare opportunity exists this week only to help the University of Alaska obtain several million dollars. This letter is a request for your help and support. A deadline for public comment occurs very soon. Comments from the public including associations and the assembly need to be submitted before July 21.

The Exxon Valdez Oil Spill (EVOS) Trustee Council will be meeting very soon to review public comment and make decisions on how to spend the \$150,000,000 EVOS Restoration Reserve fund. One idea from the public is to establish endowed research centers and chairs at the University of Alaska. These funds are the last chance for creating an endowment at UA with EVOS funds. Otherwise, the funds will very likely be spent to purchase more land. About \$500,000,000 of the \$1 billion dollar EVOS settlement has already been spent to purchase land.

A WEB site has been set up to help the public support the idea. The WEB site address is:
<http://www.alaska.net/~baker/evos.htm>

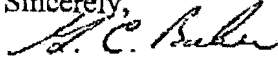
A 1997 EVOS survey showed that about 50% of responses on how to use the funds were from outside Alaska and mostly from special interest organizations. That can be compared to a similar 1993 EVOS survey that showed that only 10% of responses were from outside Alaska. So, the outside groups are more organized now. If Alaskans do not speak up, the funds will go to buy more land and end up spent by outside agencies including outside universities.

In 1993, the Fairbanks Chamber of Commerce submitted a resolution supporting the establishment of a UA endowment with EVOS funds. Supposedly, those EVOS funds were not available to make endowments and so it did not happen. However, the \$150,000,000 EVOS Reserve is different in that it can be used to make UA endowments if there is support for it. I have faxed a copy of the 1993 Fairbanks resolution to the main Assembly office for your review. Maybe the Anchorage Assembly could come up with their own resolution to meet the needs of UAA.

I urge all of you to take the time now and act on this issue. It is a very rare opportunity and this is the last of the EVOS funds. Some members of the EVOS Public Advisory Group (PAG) support using the entire \$150 million for a UA endowment. But, even if 30, 40 or \$50 million were obtained, that would be an inspiring and proud accomplishment of the public and the Assembly.

I think that obtaining funds for UA endowments is a very real possibility. But public comment supporting it must be submitted in order for the Trustee Council and the PAG members to vote for it. Thank you.

Sincerely,



Grant Baker

UAA faculty and PWS commercial fisherman

786-1056

Greater Fairbanks

Chamber

of Commerce

709 Second Avenue
Fairbanks, Alaska 99701

(907) 452-1105
FAX: (907) 456-6568

RESOLUTION 93-0712

**A RESOLUTION URGING THE EXXON VALDEZ OIL SPILL COUNCIL TO
WORK WITH THE UNIVERSITY OF ALASKA TO CREATE A GENERAL
ENDOWMENT TO THE UNIVERSITY AND TO ENDOW A SUBSTANTIAL
NUMBER OF ACADEMIC CHAIRS IN THE SCIENCES TO FULFILL THE LONG
TERM GOALS OF THE SETTLEMENT**

WHEREAS, the biological resources of the northern Gulf of Alaska were impacted by the Exxon Valdez oil spill, and

WHEREAS, the Exxon Valdez oil spill disrupted the economic and social life of many of the local residents in the Prince William Sound area, and

WHEREAS, baseline scientific data was inadequate to positively assess the damage, manage major spills, and restore the environment, and

WHEREAS, future accidents and oil spills in this area and other areas of Alaska waters are a possibility, and

WHEREAS, Alaska has more coast line than any other state in the union, making it imperative that the State of Alaska take the lead in utilizing the accumulation of scientific knowledge and promoting the advancement of scientific technology now as well as in the future, and

WHEREAS, with scientific advancements in the decades ahead eventual enhancement of many of the biological resources will be possible, and

WHEREAS, the Exxon Valdez Oil Spill Trustee Council is in charge of restoring, rehabilitating, replacing, enhancing or acquiring equivalent resources and services in the oil spill region, the accumulation of scientific knowledge to manage any future oil spills must be placed in high priority within the Council's program, and

WHEREAS, any spill of this magnitude not only effects the wildlife and fish habitat, it has economic, social and psychological effects in rural Alaska where local populations, including the native population, whose traditional life styles may be disrupted, and

WHEREAS, the University of Alaska has taken a leadership role in many of these areas of study and is strongly committed to working in rural Alaska as well as attracting students from rural Alaska, and

WHEREAS, the University of Alaska, is a statewide system with locations in Valdez, Cordova, Petersburg, Homer, Seward, Kodiak, Juneau, Anchorage, Fairbanks, Bethel, Dillingham, in addition to many other locations in Rural Alaska, and

WHEREAS, the University of Alaska currently is doing research in fisheries and oceanography and has a research vessel, and

WHEREAS, a general endowment will permit the University to fund specific projects and studies that may only require a limited time to answer, and to be flexible to fund new studies as new questions or problems arise, and

WHEREAS, endowed academic chairs will provide continuing quality scientific investigation, scientific publications, and excellence in training that will be needed by the agencies and industry responsible for resource management and development into perpetuity, and

WHEREAS, endowed chairs attract the highest quality applicants because they are not affected by the annual fluctuations of the University's budget process, and

WHEREAS, high caliber of endowed professors attract the highest quality graduate students and most often have a competitive edge in securing grants and contracts, and

WHEREAS, concentrating a major center for the advancement of sciences at the University of Alaska is in the best interests of all Alaska, since agency and industry research is normally directed to the public and may suffer from short term funding, and

WHEREAS, endowed university research is normally broader in scope, produces peer-reviewed publications, has long term continuity and produces an outflow of trained professionals, and

WHEREAS, the University of Alaska already has an appropriate Foundation for managing endowed chairs thus eliminating the cost of a new bureaucracy, and

WHEREAS, the combination of a general endowment and endowed chairs allows the University of Alaska both flexibility and long term funding with an irrevocable commitment to continue the study of all of the effects of this spill and any future spills that may happen in Alaskan waters or any other waters on this earth,

JUL 13 '93 09:46AM FAIRBANKS CHAMBER OF COMMERCE

P.5/6

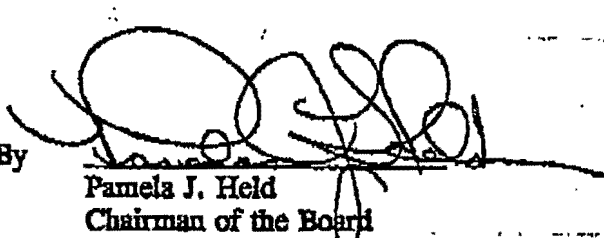
NOW, THEREFORE, BE IT RESOLVED, that the Greater Fairbanks Chamber of Commerce Board of Directors urges the Exxon Valdez Oil Spill Trustee Council to instruct their Restoration Team to contact and cooperate with the University of Alaska in developing a plan for establishing a general endowment to the University of Alaska and to endow a substantial number of chairs in the sciences that will fulfill the intent of the settlement, and that such a plan be included in the Restoration Plan and Environmental Impact Statement being prepared this year by the Restoration Team.

Dated this 12th day of July, 1993.

By


Margo Goodhew
President

By


Pamela J. Held
Chairman of the Board



Keri Hile

From: "don langiano"
To: Keri Hile
Subject: prince william sound oilspill
Date: Monday, June 22, 1998 10:06AM

I wish to air my disgust over what should have taken 2 years to accomplish still has not been done in 9 years. Exxon should be ashamed and bother by what their company looks like to the rest of the American public. I for one will never use a Exxon product again and I could have on my last vacation.

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UAF Geophysical Institute Presents Science for Everyone Lecture Series

Alumni! If you live in Juneau, Fairbanks or Anchorage, be sure and enjoy the special *Science for Everyone* lecture series, sponsored by the UAF Geophysical Institute. The GI is bringing you the latest information about Alaska's volcanoes, earthquakes, mountains, glaciers and the dancing Northern Lights. You and your family can appreciate any and all of the free after-dinner lectures given by professors in terms all ages can understand.

Fairbanks

All programs at Noel Wien Library, Wednesdays, 7:30 p.m.

- Jan. 17: Predicting the Aurora - Syun Akasofu '61, GI Director, *(with a special dedication of the series to Dr. & Mrs. William R. Wood.*
- Jan. 24: Alaska's Erupting Volcanoes - John Eichelberger, Professor Volcanology/GI
- Jan. 31: How Old is Alaska: Lasers Unlock the Secrets of Time - Paul Layer, Associate Professor Geophysics/GI, Geology & Geophysics Dept. Head.
- Feb. 7: Climate Change: Is Alaska Getting Warmer? - Glenn Shaw, Professor of Physics/GI.
- Feb. 14: How the Pieces Came Together: Building Alaska & Her Mountains - Keith Crowder, Associate Professor of Geology
- Feb. 21: Earthquakes that Shake Alaska - Doug Christensen, Assoc. Professor of Geophysics/GI
- Feb. 28: How Ice Carves Alaska - Willy Weeks, Professor of Geophysics/GI

Anchorage

All programs at Z.J. Loussac Library, Tuesdays, 7:30 p.m.

- Jan. 16: Alaska's Erupting Volcanoes - John Eichelberger, Professor Volcanology/GI
- Jan. 23: Predicting the Aurora - Charles Deehr '68
- Jan. 30: Climate Change: Is Alaska Getting Warmer? - Glenn Shaw, Professor of Physics/GI.
- Feb. 6: How the Pieces Came Together: Building Alaska & Her Mountains - David Stone, Professor of Geophysics/GI
- Feb. 13: How Old is Alaska: Lasers Unlock the Secrets of Time - Paul Layer
- Feb. 20: How Ice Carves Alaska - Will Harrison, Professor of Geophysics/GI
- Feb. 27: Earthquakes that Shake Alaska - Doug Christensen, Assoc. Professor of Geophysics/GI

Juneau

All programs at the Mendenhall Glacier Visitor Center, Tuesdays, 7:30 p.m.

- Jan. 30: Watching the Northern Lights - Tom Hallinan, GI Professor Physics
- Feb. 6: How Old is Alaska: Lasers Unlock the Secrets of Time - Paul Layer
- Feb. 13: Alaska's Erupting Volcanoes - Steve McNutt, GI Volcano Seismologist
- Feb. 20: Earthquakes that Shake Alaska - State Seismologist Roger Hansen, GI

Board Passes Resolution to Endow Chairs from EVOS

-by Chip Wagoner

What does the UAF Alumni Association Board, the American Ornithologists' Union, the Wildlife Society, the Pacific Seabird Group, the Alaska District of the American Institute of Fishery Research Biologists and the American Bald Eagle Foundation all have in common? All have endorsed using funds from the Exxon Valdez Oil Spill (EVOS) civil claims settlement between the state and federal governments and the Exxon Corporation to endow academic and research chairs at the University of Alaska.

The settlement funds are managed by the EVOS Trustee Council composed of six state and federal governmental officials. The Council's mission is to "efficiently restore the environment injured by the oil spill to a healthy, productive world renowned ecosystem, while taking into account the importance of quality of life and need for viable opportunities to establish and sustain a reasonable standard of living."

The Alumni Board joined University of Alaska President Jerome Komisar and James King '49, a member of the EVOS Trustee Council Public Advisory Group, in urging the Council to provide for the long term needs to monitor and study the impacted resources, communities and populations by endowing academic chairs at the University of Alaska. As a public at large member of the advisory group, Jim King is proposing that the Trustee Council ask the EVOS Restoration Office and the University of Alaska to prepare a detailed plan to use a portion of the restoration reserve to endow chairs designed to fulfill the EVOS settlement obligation.

The UAF Alumni Board asks you to help both the university and the resources of Prince William Sound by writing to the EVOS Trustee Council at 645 G St., Suite 401, Anchorage, AK 99501 and supporting this endowment. Please write and send copies to the Alumni Office. Thank you.

CLERK'S OFFICE

APPROVED

Date: 7-21-98

ANCHORAGE, ALASKA

AR NO. 98- 250

Submitted by: Assemblymember WUERCH, Abney, Von
Prepared by: Assembly Office Gemmingen, Kendall, Murdy
For reading: July 21, 1998 and Bell

A RESOLUTION OF THE ANCHORAGE MUNICIPAL ASSEMBLY URGING THE EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL TO WORK WITH THE UNIVERSITY OF ALASKA TO CREATE A GENERAL ENDOWMENT TO THE UNIVERSITY FROM THE EXXON VALDEZ OIL SPILL RESTORATION RESERVE FUND

WHEREAS, the northern Gulf of Alaska was impacted by the Exxon Valdez oil spill, which damaged the biological resources in the Prince William Sound area, and disrupted the economic and social life of many of the local residents; and

WHEREAS, the Exxon Valdez Oil Spill (EVOS) Trustee Council is in charge of restoring, rehabilitating, replacing, enhancing or acquiring equivalent resources and services in the oil spill region, and the accumulation of scientific knowledge to manage any future oil spill must be placed in a high priority within the Council's program; and

WHEREAS, the EVOS Trustee Council is currently accepting public comments on how to spend the \$150 million EVOS Restoration Reserve Fund; and

WHEREAS, one idea that promises many benefits for Alaskans is to use these funds to establish endowed research centers and chairs within the University of Alaska, especially since these funds represent the last chance to create a university endowment with the oil spill settlement money; and

WHEREAS, such endowments would allow research for restoring and protecting spill affected areas, and for developing and marketing educational courses and patents for oil spill cleanup technology; and

WHEREAS, use of the EVOS Reserve Fund would go a long way in creating a self-perpetuating environment of teaching and learning.

NOW, THEREFORE, the Anchorage Municipal Assembly resolves:

Section 1: That the Assembly urges the Exxon Valdez Oil Spill Trustee Council to work with the University of Alaska to create a general endowment to the university from the Exxon Valdez Oil Spill Restoration Reserve Fund.

Section 2: That, upon passage, the Municipal Clerk provide copies of this resolution to the EVOS Trustee Council and the EVOS Public Advisory Group.

PASSED and APPROVED this 21st day of July, 1998.

Fay Von Gemmingen
Chair

ATTEST:

Lizanne Morgan
Municipal Clerk

Municipality of Anchorage
MUNICIPAL CLERK'S OFFICE
AGENDA DOCUMENT CONTROL SHEET

AK98-250

1	SUBJECT OF AGENDA DOCUMENT	DATE PREPARED 7-20-98
	Urging Use of EVOS Restoration Reserve Funds for U of Alaska	INDICATE DOCUMENTS ATTACHED
		AR/attachments
2	DEPARTMENT NAME <i>Assembly</i>	DIRECTOR'S NAME
3	THE PERSON THE DOCUMENT WAS ACTUALLY PREPARED BY <i>G. Moyer</i>	HIS/HER PHONE NUMBER
4	COORDINATED WITH AND REVIEWED BY	INITIALS DATE
	Mayor	
	Municipal Clerk	
	Municipal Attorney	
	Employee Relations Director	
	Municipal Manager	
	Finance	
	Community Development and Planning	
	Property and Facility Management	
	Management Information Systems	
	Office of Management and Budget	
	Purchasing	
	Operations Manager	
	Cultural and Recreational Services	
	Fire	
	Health and Human Services	
	Police	
	Public Works	
	Transit	
	Merrill Field (Airport)	
	Municipal Light and Power	
	Anchorage Water and Wastewater	
	Port	
	Solid Waste Services	
5	SPECIAL INSTRUCTIONS/COMMENTS	
	<i>Cancel Agenda -</i> <i>Addendum - For Action, T.C.</i>	
6	ASSEMBLY MEETING DATE <i>7/21/98</i>	7 PUBLIC HEARING DATE REQUESTED

RECEIVED
 Office of Municipal Clerk

Jul 21 1998

P.O. Box 103350
 Anchorage, AK 99510-0350



July 8, 1998

RECEIVED
JUL 13 1998

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Molly McCammon, Executive Director
Exxon Valdez Oil Spill Trustee Council
645 G Street, Suite 401
Anchorage, Alaska 99501

RE: Chugach Alaska Corporation/Carbon Mountain

Dear Ms. McCammon:

As General Counsel for Chugach Alaska Corporation, I am responsible for managing relationships with public agencies whose activities affect the corporation's land holdings. In light of the Trustee Council's activities in Prince William Sound, it is inevitable that issues would arise on which we find ourselves on opposite sides. Kadco's proposal to sell its Carbon Mountain coal interests to the Council is such an issue.

Since we have not met, I was not looking forward to writing the strong letter which appeared to be warranted when the matter first made the newspapers and our congressional delegation got involved. I was, therefore, relieved to read your response to the Voice of the Times clarifying the Council's position.

So there is no misunderstanding, I want to make Chugach Alaska Corporation's position clear as well. The Board of Directors has long been on record that the Corporation's ANCSA lands are not for sale. We unequivocally oppose an extension of the Restoration Area boundaries which would include the Carbon Mountain area. Since, other than Kadco's interest in the coal, we are the only private landowner in the area we would view such an extension as an attempt by the Council to frustrate our development of our property including our timber resources.

For the same reason, we oppose any plan to purchase Kadco's interests. Kadco only has an ownership of some of the known coal deposits. Chugach Alaska Corporation continues to own the surface and the balance of the subsurface. Purchasing Kadco's rights alone would not make any sense unless it was, as Senator Murkowski assumed, an "attempt to control use of Native owned surface resources through control of the subsurface." You can understand why we would resist such efforts.

Molly McCammon
July 8, 1998
Page 2

While I take the statements in your letter to the *Times* at face value, we believe that the Forest Service may be considering entertaining Kadco's offer. First, according to the enclosed letter from Acting Regional Director James Caplan, the Forest Service is conducting a Biological Evaluation to determine if any species affected by the *Exxon Valdez* oil spill inhabit our Carbon Mountain tract, or the easement corridor from the Copper River Highway to our property. The apparent purpose of this study is to determine whether the Council should extend the Restoration Area boundary. Second, our former lands manager, Mark Stahl, had discussions with Jim Wolfe, the Forest Service's Trustee Council designee, which were less than reassuring. Copies of these letters are attached.

For these reasons, I attended the meeting of the Council held on July 1, 1998. It was my intention to put our position on the record as well as meet you and the Council members personally. I was not aware that the meeting was a continuation and that no public comment would be taken, or that all of the members would appear by phone. Nonetheless, it was useful to understand a little better how the Council functions.

Chugach Alaska Corporation will be represented at the August meeting and will speak to our opposition to any extension of the Restoration Area or public purchase of interests in our lands. We would appreciate written notice of the meeting and an agenda when it is available. Until then, please accept this letter as expressing not only our opposition to any such extension or purchase, but also to the use of public funds to conduct a Biological Evaluation on our lands relating to these purposes.

I sincerely hope that the concerns raised by Senator Murkowski are unwarranted and that this issue may soon be put to rest. Thank you.

Sincerely,

CHUGACH ALASKA CORPORATION
Office of General Counsel



Peter W. Giannini
General Counsel

PWG/dac
Enclosure



United States
Department of
Agriculture

Forest
Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802

File Code: 1590

Date: May 22, 1998

RECEIVED

CHUGACH ALASKA CORPORATION
LEGAL DEPARTMENT

Mr. Michael E. Brown, President
Chugach Alaska Corporation
560 East 34th Avenue, Suite 200
Anchorage, AK 99503-4196

MAY 26 1998

Routed to:

Received by:

Comment:

Delivered:

Dear Mr. Brown:

The first thing I want to assure you of is that Dave Gibbons, the new Forest Supervisor of the Chugach National Forest, and I are committed to maintaining and improving the relationship between Chugach Alaska Corporation (CAC) and the Forest Service. I also want to assure you that we are committed to meeting our obligations to you to secure access to the Carbon Mountain Tract as per our Memorandum of Understanding. It is my understanding that work is proceeding smoothly to identify and secure an easement to the Carbon Mountain Tract.

As part of our past discussions with members of your staff, we have informed Chugach Alaska Corporation of Dr. Rick Steiner's efforts and provided correspondence between Dr. Steiner and Korea Alaska Development Corporation (KADCO). However, the Forest Service is remiss in that we failed to inform you of the recent meeting with Dr. Joo Shin of KADCO.

Dr. Rick Steiner, acting independently, asked Dr. Shin to travel to Alaska to meet with the Exxon Valdez Oil Spill (EVOS) Trustees to discuss the potential to acquire the coal reserves held by KADCO. When we were first apprised of Dr. Steiner's attempts to schedule this possible meeting, we advised Dr. Shin and Dr. Steiner that we felt the meeting would not be productive because the area was not within the oil-spill-affected area as defined by the EVOS Trustees, and we had no interest in acquiring the coal reserves using other federal funds. However, Dr. Steiner ultimately did arrange for Dr. Shin to travel to Alaska. Copies of our correspondence with Dr. Steiner are enclosed, which we believe complies with the Freedom of Information Act request in your letter.

EVOS Trustees are obligated to accept proposals from the public and private landowners for the purposes of restoring resources injured by the oil spill. As an EVOS Trustee agency, we normally would participate in such discussions. Phil Janik requested that Molly McCammon, Executive Director of EVOS, coordinate any meeting involving members of the EVOS Trustee Council and EVOS staff. At Dr. Steiner's request, such a meeting was held on May 1, 1998.

Attendees included:

Molly McCammon	Executive Director, EVOS
Eric Myers	Operations Director, EVOS
Deborah Williams	Department of Interior
Ken Holbrook	Forest Service
Dr. Shin	KADCO

Client No. 1016
File No. 004
Doc. No. 118
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Mr. Michael E. Brown, President

2

Mr. Webber	KADCO Lawyer
Dr. Steiner	Anchorage Resident
David Grimes	Cordova Resident
Toni Terrini	National Wildlife Federation
Bob Hendricks	Native Village of Eyak
Dunc Lankard	Eyak Shareholder
Ricki Ott	Cordova Resident/Copper River Watershed Project
Frank Rue	AK Fish & Game (Teleconference)
Jim Wolfe	Forest Service (Teleconference)
Dave Gibbons	Forest Service (Teleconference)

Drs. Shin and Steiner made the presentation on the long history of the coal fields, the current status and potential plans for development of the coal reserves. Dr. Shin stated that he was interested in selling the resource to EVOS for restoration purposes. Jim Wolfe and Molly McCanmon informed the group that this area was outside of the oil-spill-affected area and that EVOS has no plans to acquire lands outside the area for restoration purposes. It was also stated that the EVOS Trustee Council did not have funds at this time to make additional acquisitions.

The group agreed that the Trustee Council would evaluate the restoration value of the property and define its possible link to the oil-spill-affected area. Jim Wolfe agreed the Forest Service would do this and bring the results to the Trustee Council in August 1998. We will notify you when the subject is taken up by the Council. Neither the Forest Service nor EVOS Trustees have made a commitment to acquire the property nor have we encouraged KADCO or Dr. Steiner to bring this proposal forward.

You commented that the Chugach Forest Plan Revision allows eligibility for further considerations for Wild and Scenic rivers. The Plan effort is a three-part process. The first step is the resource-value determination which is based on the professional opinion of agency resource specialists. The second step is tentative classification which is sensitive to needs such as your access rights to the Carbon Mountain area. Both of these steps have been completed. The third step in the process is a suitability determination which will again take into account your rights of access. The final recommendations will be made after the third step is completed. We have not ignored your comments with respect to Forest Plan revision; they were considered in tentative classification and will also be used in the suitability determination. In addition, the Plan revision process will consider your comments at the draft environmental impact statement stage.

On another note, I am aware of the situation you raise regarding the Kiniklik property. The Forest Service did acquire the old Russian church site in 1996 using EVOS restitution funds. The EVOS Trustees solicited interested landowners in 1993 about the possible sale of their lands. The owners of the Kiniklik property submitted a letter to EVOS stating their interest in selling their land. The willing seller/willing buyer deal was consummated in 1996. Our sole purpose was to protect the site and its important link to injured resources of the oil spill. I hope our newly started land-exchange program with you can resolve this to both of our satisfaction in the very near future.

Dave and I assure you that we have no intentions of jeopardizing our relationship. We are also completely committed to meeting our obligations to you on the Carbon Mountain Tract access

Mr. Michael E. Brown, President

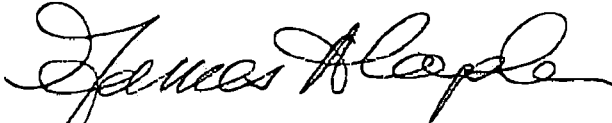
3

project and that we will continue to work within the requirements of the Memorandum of Understanding and CNI agreements.

I very much want to maintain a positive relationship with you. To that end, I propose we schedule a meeting to discuss these and any other issues of concern to you. I also propose that we agree to meet regularly in the future. The best way to strengthen our relationship is for us to fully understand and discuss our issues and concerns.

Please feel free to contact me at 907-586-8863 or Dave at 907-271-2525 at any time.

Sincerely,



JAMES A. CAPLAN
Acting Regional Forester

Enclosures

cc:

Congressional Delegation
Chugach National Forest
Molly McCammon, EVOS

Han Yang Law Office

한 양 법률 사무소

Attorneys at Law
Suite 401
Korea Bar Association Bldg.
160, Dangju-Dong, Jungro-Ku
Seoul 110-071, Korea
Tel : 02-738-4771/2
Fax : 02-738-2967

Date : March. 28. 1998.

Time:

To : Professor Nick Steiner.

CO :

Fax No : 907-278-8357

From : H. Joo Shin.

Subject :

Total Pages :

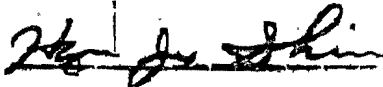
Messages:

Dear Professor Steiner:

Thank you very much for your letter of March 27, 1998.
I would be delighted to go to Anchorage to meet with
Mr. Janik and his colleague. I am also very anxious to
see you during the trip. It doesn't seem to be easy to
coordinate the time of every person involved from this
end. If it is not too much imposing upon you, I would

appreciate your kind favor of organizing the meeting. In order to make it easy for you to coordinate the time, I will make myself available anytime in the month of April except 6 days between April 8 and 14. Also, I can stay in Anchorage as much as you instruct. Again, I deeply appreciate your kind interest in our efforts in Alaska and I am looking forward to hearing from you soon.

Sincerely,



Hyun Joo Shin

April 3, 1998

Molly McCammon, Executive Director
EVOS Trustee Council
645 G. St., Suite 401
Anchorage, AK 99501

via facsimile: 276-7178

Dear Molly,

I would like to request that the Trustee Council expand the northeastern edge of the previously designated "Exxon Valdez Oil Spill Boundary" eastward to include the entire Copper River Delta/Bering River ecosystem. Presently, the boundary lies just west of the Copper River, bisecting the ecosystem. I understand that this boundary was drawn many years ago on a political and otherwise somewhat arbitrary basis. Considering the present interest by the Clinton and Knowles administrations to focus resource management efforts on whole, intact ecosystems, it seems time to redraw the old oil spill boundary to reflect this thinking. I propose that the boundary be moved from its present location at the 145 degree Longitude line eastward about 60 miles to approximately the 143 degree line, in order to encompass the entire coastal ecological complex - the Copper River Delta, Marten River, Bering River, Controller Bay, Kayak Island.

By any bio-physical accounting, the Copper River Delta/Bering River area represents an intact ecological complex that should be managed as such. Arbitrarily splitting the area into two makes no sense from any reasonable standard of biological interaction. And as this area is one of the most unique and productive coastal ecosystems in the world, it clearly deserves such recognition by government managers.

Further, the Copper River Delta/Bering River complex lies only about 100 miles from the region of maximal oil spill impact - western PWS - much closer geographically and ecologically than other areas within your present boundary such as Ivanof Bay and Chignik Bay, some 400 miles from the maximal impact area. The eastern delta also interacts much more closely with the western Sound than many of the other more distant regions out on the Alaska Peninsula. Many of the populations injured by the spill spend a considerable amount of time in the Copper River Delta/Bering River region, and any further degradation in this habitat will only further delay recovery. Additionally, as an area in which to acquire conservation easements to offset and mitigate the spill's damage, this is perhaps the most important opportunity remaining. With the boundary redrawn as proposed, the Trustee Council should begin immediately to work with the Chugach Alaska Corporation, Koncor, Korea Alaska Development Corporation, and others to secure protections for the east Delta and Bering River area.

I ask that this issue be scheduled as a discussion/action item on the next Trustee Council agenda. Thanks as always for your consideration.

Sincerely,



Rick Stelner, The Coastal Coalition
9940 Nearpoint Dr., Anchorage, AK 99507



United States
Department of
Agriculture

Forest
Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802

File Code: 5400

Date: APR 2 1998

Mr. Rick Steiner
The Coastal Coalition
9940 Nearpoint Drive
Anchorage, AK 99507

Rick
Dear Mr. Steiner:

You have requested a meeting between you, Dr. Hyun Joo Shin, and me concerning the possibility of the federal government acquiring the Bering River Coal Field coal rights. As I previously stated, I would welcome the opportunity to meet with Dr. Shin. I need to stress; however, that I see only a very limited opportunity for any kind of successful negotiations. I would not recommend the government spending Land and Water Conservation Fund money for only the subsurface coal rights without acquiring the full fee estate.

Also, as I stated in my March 6, 1998, letter to you, if the oil spill affected area is expanded by the Trustee Council, the options for protection of the Bering River will be looked at with full diligence.

At this time I would suggest that Dr. Shin not make a special trip for the sole purpose of beginning negotiations with the United States on his interests in the coal fields. If Dr. Shin is in the area for other reasons I would be happy to meet with him.

Please feel free to call Dave Gibbons, the Forest Supervisor of the Chugach National Forest, at (907) 278-8012 or Dennis Kennedy of my office at (907) 586-7872 if you would like to discuss this in further detail.

Sincerely,

PHIL JANIK
Regional Forester

RECORD COPY

cc:

Dave Gibbons, Chugach National Forest

Deborah Williams, DOI



March 30, 1998

Mr. Phil Janik, Regional Forester
USDA, Forest Service
Alaska Region
P.O. Box 21628
Juneau, AK 99802-1628

via facsimile: 907-585-8863

RE: meeting with Dr. Hyun Joo Shin on Bering River coal field

Dear Phil,

First, thanks very much for your letter agreeing to meet with Dr. Shin about the possibility of the federal government either acquiring or trading the coal patent at Bering River in the interest of conservation.

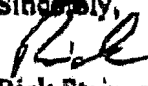
I forwarded your note to Dr. Shin this weekend, and he replied that he would be glad to come over to meet with both of you on this issue (see attached). I spoke with him Saturday and he asked that I help arrange the meeting, and that I participate in it if possible (which I would be glad to do, if you folks have no problem with my participation).

As he has commitments in Japan from 4/8 - 4/14, and I understand you are back in Washington for another week or so, it seems that late April would be a target period to try to arrange a meeting. I would appreciate you and Deborah Williams getting together on a potential date, time, and location (Anchorage?) for the meeting, and letting me know and I will communicate your suggestions to Dr. Shin, and then confirm with you.

I appreciate your willingness to look at this issue. Given the extraordinary fisheries and wildlife values of the area and its rich history (information on which I will send along to both you and Deborah later), this is an extremely important conservation opportunity. I also appreciate your willingness to consider using EVOS funds for this (with reconsidered spill region boundaries), and want to explore any and all other alternative options with you as well - Land and Water Conservation Fund monies, trade of the patent for other federal properties elsewhere, Congressional action, etc. I understand the Kennicott copper patent was traded in order to provide protections for the Wrangel-St. Elias National Park, and others such transactions have occurred in the lower 48. I think with your commitment to conserving this extraordinary area and your creativity and negotiating skill, a win win solution is possible here. I knew this is just one piece of the conservation puzzle for the area, but many of us think this is the critical first step.

I will look forward to hearing from you and/or your staff regarding a time and place for this meeting.

Sincerely,


Rick Steiner, The Coastal Coalition, 9940 Nearpoint Dr., Anchorage 99507
907-333-3381 (or 907-274-9691 daytime)

cc:
Deborah Williams, Department of Interior
Forest Supervisor, Chugach National Forest



United States
Department of
Agriculture

Forest
Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802-1628

File Code: 5400

Date: MAR 05 1998

Mr. Rick Steiner
The Coastal Coalition
P.O. Box 830
Cordova, AK 99574

RECORD COPY

Dear Mr. Steiner:

Thank you for your letter of December 15, 1997, regarding your meeting with Dr. Hyun Joo Shin in Seoul concerning the Bering River Coal field. Deborah Williams and I have visited concerning your communication and the opportunity to discuss possible conservation options for protecting this area. We would both be glad to meet with Dr. Shin to discuss what ideas he may have for exchange or purchase of the coal field lands. As you know, the Bering River Coal field is presently outside the defined Exxon Valdez oil spill affected area of primary restoration emphasis and thus, it would be extremely difficult to propose acquisition of this land using settlement monies.

In the future the oil spill affected area maybe expanded by the Trustee Council. They may consider expanding the area to include the vicinity of the Bering River, thus, the protection for this area could be explored using settlement funds. Again, thank you for bringing this to our attention and if Dr. Shin does visit Alaska, both Deborah and I would be glad to meet with him.

Sincerely

PHIL JANIK
Regional Forester

cc:

Deborah Williams, Department of Interior
Forest Supervisor, Chugach National Forest



February 13, 1998

TO: Deborah Williams, DOI fax 271-5485
Phil Janik, USFS fax 586-8863

FR: Rick Steiner, Anchorage ph 333-3381 (daytime ph 274-9691) *RS*

RE: Bering River conservation opportunity

Hello folks. Regarding the communication I sent to the Bering River environmental working group and yourselves last December, I just spoke with Dr. Hyun Joo Shin in Seoul about whether he would be willing to come to Alaska to meet with you on this issue, and he said he would enjoy the opportunity to discuss this with you.

As you know, the financial situation in South Korea is quite difficult at present, and I have a feeling that KADCO's interest in the Bering River coal deposit could be acquired for conservation purposes at a bargain. Dr. Shin told me that other Korean coal companies have indicated an interest in the deposit, but he remains open to the conservation options I proposed to him last December.

I know both of you are quite busy, and Phil you are moving back to Washington sometime this spring. But I'm sure you both agree that this is an opportunity that deserves to be explored, and I would be glad to help facilitate your getting together with Dr. Shin to discuss it further.

I will anxiously look forward to your response.

OPTIONAL FORM 98 (7-90)

FAX TRANSMITTAL

of pages *14*

To <i>Jim</i>	From <i>Dave</i>
Dept./Agency	Phone #
Fax # <i>586-7840</i>	Fax #

NEN 7840 01-317-7058

8098-101

GENERAL SERVICES ADMINISTRATION

December 15, 1997

TO: Bering River Environmental Working Group

FR: Rick Striner

RE: Report on December 9, 1997 meeting in Seoul with Dr. Hyun Joo Shin, Chairman of Korea Alaska Development Corporation (KADCO)

Hello friends. Before returning from my recent trip to Japan I had the opportunity to meet with Dr. Hyun Joo Shin in Seoul regarding the Bering River coal field. We met for several hours at the Hyatt in Seoul, and I thought it would be good to give all of you a brief synopsis of that meeting.

First of all, Dr. Shin is an absolutely fascinating person. He was one of three Fulbright Scholars from Korea to the U.S. in the early 1960's, when he obtained a Law degree from Yale. He then earned a Ph.D. in International Administration from SUNY, served in 1970 as Deputy Director of the "1990 Project" (an international think tank), was counsel to the New York Joint Legislative Committee on Crime from 1969 - 1974, Professor of Criminology at CUNY, and Chairman of the Interpacific Energy Corporation (a large oil conglomerate). From 1975 - 1985 he worked for the Korean government, overseeing approximately \$20 billion in contracts with Saudi Arabia. Dr. Shin became involved in Alaska back in 1981 with the establishment of the Korea Alaska Development Corporation (KADCO) when it purchased the coal patent at the Bering River/Carbon Mountain area. He has bid on several other large Alaska development projects, including the shipyard that is now in Seward, several oil projects, etc., and seems very well connected with Alaska politics.

Initially, KADCO was a partnership between Hyundai - 33%, Samsung - 33%, Daesung and Samtong (two Korean coal companies) owning the other 33%. In January 1997, all of the interest in KADCO was transferred to Dr. Shin. As KADCO owned all of the Bering River coal deposit in Fee Simple, Dr. Shin now owns all of the Bering River coal field fee simple. He holds 100% of the stock of KADCO, although one of the former partners still holds a 15% stock option as sort of a performance security. KADCO now has three Directors, all of them Korean. They are collecting about \$100,000/yr. from Chugach Corp. as repayment of a \$1.5 million debt, and this at present is the primary operating money for KADCO.

Proposed Development Plan -

The important conclusion of the meeting was that he is very interested in potential alternatives to developing the deposit, but before we arrived at that conclusion he went over KADCO's plans for developing the mine in some detail and with considerable candor. The deposit holds about 200 million tons of recoverable coal, as estimated by a feasibility assessment done about 10 years ago. It is "exceptionally high quality" - low ash, low water content, high heat value - about 6000 calories compared to about 2000 - 2500 for Usibelli (of Usibelli coal, Dr. Shin proclaimed that "it's not coal, it's essentially dirt", and that Usibelli coal is comprised of a lot of clay, sells for only about 20 cents/ton in Alaska and is used in Korea just to maintain the furnace fires at low energy demand at night).

Scul Meeting
Page 2.

The Bering River deposit is comprised of about 30% anthracite, 25% steaming coal, and 45% coking coal. Dr. Shin told me that they have been proceeding with plans to develop the mine for the past five years or so, and then, with a grin, said they had tried to keep it very quiet knowing that we environmentalists would find out about it sooner or later.

The plan is to mine the coal about 1/2 by "semi open pit" and about half by "semi tunnel." The tunnels would be dug 10 - 20 meters beneath the ground. A power plant would be built near the mine, and a power transmission line would be built (possibly by Hyundai) to Cordova. He envisions transmitting power cheaply to Cordova, even at little or no profit, for 10 years or so, to make it feasible to construct the facilities, get government subsidies, etc. But he readily admits that once the facilities are in place, there will most likely be a financial imperative to sell the mine and begin exporting coal, either via railroad to Cordova or via a port at Katalla/Controller Bay. He estimates that it would be feasible to develop the mine once oil prices rise to \$35/barrel (as coal prices would rise respectively). ①

The main impacts he sees from any coal mining operation are four: 1) how you dig it (strip is worst); 2) how you store it after extraction; 3) how you transport it; and 4) how you store it pre-export. As he sees the proposed development, he is comfortable that problems 3 and 4 above are eliminated at least in initial 10 years or so of operation, and much of problem 1 is reduced by semi-tunnel extraction. He envisions three coal storage areas in the Bering River area - one at the mine mouth, a secondary collection area separating it by type and quality etc., and storage piles at the power plant, separated into certain grades pre-processing. It is these coal storage piles that cause him most concern environmentally. He told me that if, from some large rain, flood, or seismic event one or several of these huge coal piles washes down and away, then "KADCO is dead." The mine would need to store from 100,000 - 500,000 tons of coal on site at any one time, as a considerable amount needs to be on hand during winter power generation and inactive mining season. As finances would ultimately necessitate export, Dr. Shin has shown the area to Germans, Australians, and recently a Canadian company ("P & R") who is now mining a huge deposit of bird guano for fertilizer in Saskatchewan. Any contract he would enter into there would be structured to shield KADCO from any environmental liability, he said.

Interest in Alternatives -

After the above discussion, I began to explore his willingness to entertain alternatives to moving forward with the development, and found his somewhat visionary, philosophical core from which he opened to discussing alternatives. First of all, after decades in the oil and coal business, he doesn't think either one should be burned as fuel - something I think most of us can agree with. He used the metaphor that it was like burning library books for heat, something he and many others engaged in just after the Korean war as there was little in the way of heating fuel, so many people burned library books for heat - particularly those written in Japanese that they couldn't read anyway, but also some national treasures such as the Lee Dynasty books, etc. They also used the books for toilet paper and home insulation. He feels that the tremendous value in hydrocarbon deposits is not in simply burning them, but rather in synthesizing any number of substances from the thousands of chemical compounds that are found few other places. He says we can always go to Mars, the moon, or elsewhere for minerals, but where else are we going to find such hydrocarbon reserves? Burning these substances in a century or two that have taken many millions of years to accumulate on Earth is a travesty, he feels.

Seoul Meeting
Page 3.

When, in 1970, he was Deputy Director of the International "1990 Project" at SUNY, the project team made many predictions about how the world would be in the "far off" year of 1990, and all but one came true much earlier than 1990. The one that did not come about was that the world would, by 1990, no longer use much oil and coal for an energy source, instead realizing it's true value. He now projects that this dramatic and inevitable shift will occur in the next 20 - 30 years.

Back in the early 1980s when KADCO was formed and they acquired the Bering River coal patent, coal was the source of about 70% - 80% of Korea's energy, importing about 30 - 50 million tons/year. Now, Dr. Shin says that only about 5% - 10% of Korea's energy comes from coal, about 40% from nuclear (with 10 nuclear power plants at 100 MW each), 30% oil (importing about 2 million barrels/day), and 10% - 15% hydro. Further, that the Korean energy sector is phenomenally energy inefficient - one of the reasons he cites for the recent, unprecedented collapse of the Korean economy. This was a profound admission for an international energy mogul on the very day that the Kyoto climate conference was winding up just across the sea of Japan! He contrasted Japan's economic output of 10 times or so of Korea on just about twice the energy demand. At any rate, Dr. Shin sees the big picture - something I'm afraid many in the U.S. energy sector and government either can't see or don't want to admit.

That's some of his philosophical underpinnings in the discussion of alternatives to going forward with the proposed mine plan at Bering River. He says "this is not a religion, it's a business." Then he said of the Bering River coal field that "this is my big toy, and a toy has to stay a toy or it can become destructive." Instead of launching into a discussion of what it would cost to buy him out, I began by proposing that it might be possible to arrange a trade of the coal patent for an equivalent value of federal surplus property elsewhere in the U.S., which fascinated him. He was quite intrigued by such a notion. When we talked value, he said that in the good days (in the 1980's) good coking coal would go for \$100/ton in Canada, and that "a real fool" might pay \$1/ton for the subsurface patent rights. Now he says that most likely a buyer would ask maybe 10 cents/ton for the patent, and that this would be adjusted for several factors including costs and risks of development, electric potential, government subsidy potential, etc. At 10 cents/ton for a 200 million coal field, it would translate into only about \$20 million. Also, he expects environmental lawsuits, and he said so does Chingach. He said they have budgeted about a two year delay as a contingency from the "expected ritual" of environmental litigation and dissent. Such a delay is another factor in calculating any sale price for the field. ②

When I brought up some of the wildlife and fisheries resource values in the area, his eyes squinted in recognition and agreement. He told stories of spending time at their exploration camp watching bears catch salmon from crystal clear streams, and the birds and glaciers. When I commented what a beautiful setting Seoul was in, surrounded by granite mountains, he told me how it is an oriental tradition to sit communities within the circle of mountains "in order to contain the Chi." "The Chi, or essential spirit, flows from the mountains and can be blown away by the wind, so mountains help to contain the Chi." Mountains are necessary to hold or block Chi, as is water. He said this is no joking matter in many oriental industrial interests - in fact Hyundai and Samsung, his former partners in the Bering River field, regularly consult "Chi experts" to assess the suitability of particular locations for their proposed industrial operations, although he admitted "it doesn't always work out."

Seoul Meeting
Page 4.

I asked him if he planned to consult a Chi expert to assess the Bering River area and he said "most definitely." I went on to suggest that certainly any good Chi expert would determine the Bering River area should be left undisturbed so as to contain the existing Chi in the area, and he laughed replying that perhaps, but perhaps he would determine that a mine would be all right there. He did admit that a large scale mine certainly disrupts the natural flow of Chi. This was a wonderful discussion, particularly in that this spiritual notion was coming from an international energy mogul, not from the center table at a Berkeley coffee shop.

I came away from the meeting feeling hopeful. I asked for a letter expressing his willingness to explore conservation alternatives, which he promptly provided and is attached. I have the sense he was glad to have been approached, and that any potential for conservation would certainly

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16:47 No.001 P.15

increase by adding stock and leverage. He stated that he and perhaps he alone has the financial resources, experience, and resources to make the development of the mine at Bering River feasible, and thus that it is his experience that gives value to the deposit. He is very willing to discuss any potential sale or trade for conservation with anyone, particularly the U.S. government. I explained the habitat protection process for the Buxton Valdez restoration program, and that there was considerable interest among the environmental community in finding a way to protect the Bering River area as well. I got the sense that he really enjoys making deals, and that if this is fun, he's game.

It is kind of a fitting new chapter in the rich history of the Bering River coal field - after being fought over by international syndicates and presidents earlier this century, now it's all in the hands of one visionary Korean entrepreneur who owns it free simple and is willing to entertain offers to sell or trade the patent in the interest of conservation! Teddy Roosevelt and Gifford Pinchot must be smiling from wherever they are in the cosmos.

Where this takes us is unclear at present, but I feel this is an extraordinary opportunity to begin piecing together a conservation regime for this special place. We should make this opportunity known to the appropriate government officials - particularly the Department of Agriculture and Department of Interior as the two adjacent land owners. I also can't help but think that the purchase of this 200 million coal patent for conservation purposes might be seen also as a symbolic gesture - that the Clinton Administration recognizes the seriousness and interrelatedness of our climate and energy crisis expressed last week by the international community at Kyoto, and that this would be just another 200 million tons of hydrocarbons that won't be burned and pumped into our atmosphere. And, of course, it could provide some momentum for the Chugach Corporation to begin considering alternatives to their proposed activities for the area.

Korea Alaska Development Corporation

Suite 401
Korea Bay Association Bldg.
180, Dongsil-Dong, Jongro-Ku
Seoul 110-671, Korea
Tel : 02-735-4771/3
Fax : 02-735-2257

Date: December 11, 1997. Time:
To: Professor Rick Steiner, The Coastal Coalition
cc:
Pax No: 907-276-8357
From: B. J. Sain, KADCO
Subject: Gwich'in Mountains Coal Field
Total Pages: 8

Message :

December 11, 1997

Professor Rick Steiner
The Coastal Coalition
9940 Nearpoint Drive
Anchorage, Alaska 99507

Dear Professor Steiner:

I hope that you had a pleasant trip back to Anchorage. I was deeply impressed by your serious interests and efforts to conserve the coastal region of Alaska. While KADCO has been working on the development of its Carbon Mountain coal field, you will be assured that KADCO will follow and observe every environmental precautions and requirements. Especially during the first stage of the development which aims at building power generation facilities right at the mine mouth and transmission of power so generated to the adjoining community, the project is hardly a coal mine operation as such.

At the same time, as I indicated during the meeting at Hyatt, we are also open to any suggestions or discussions for a sale or swap of the coal patent if the

DEC-31-87 WED 10:00

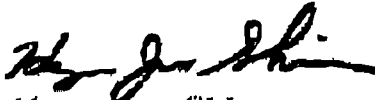
CORVA RANGER DIST

FAX NO. 8074247214

P.08

terms are reasonable, which may enable us to switch our business to an area that is free of environmental concern. I am enclosing the maps and coordinates of the coal deposit area that you requested. I would be delighted to continue our discussions further with the view of achieving some tangible results.

Sincerely,



Hyun Joo Shin

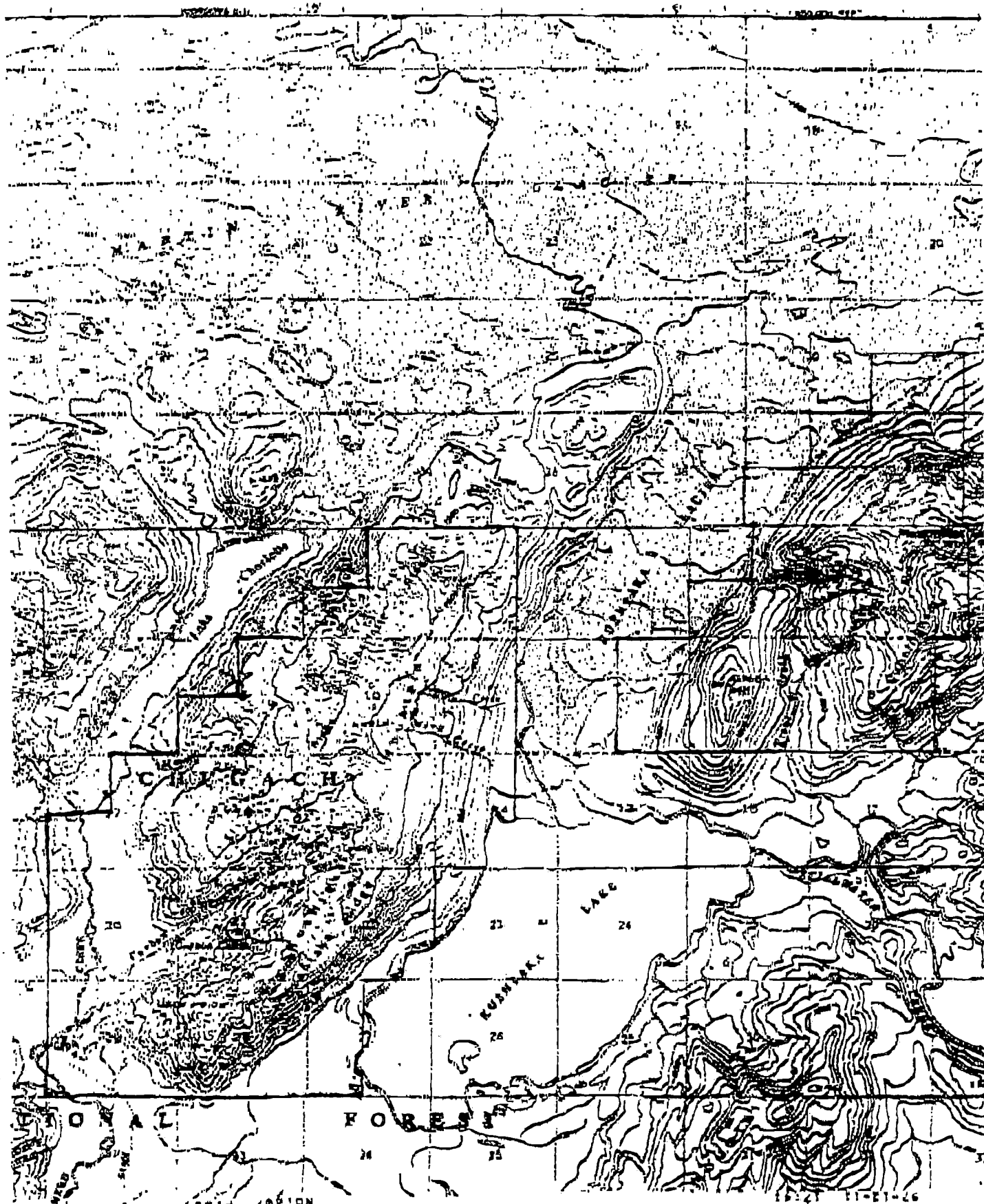
Chairman

Korea Alaska Development Corporation

CORDOVA (B-1) QUADRU

ALASKA

1:50,000 SERIES TOPOGRAPHIC



DEC-31-97 WED 10:02

COPPER RANGER DIST

FAX NO. 9074247214

P.09

P.06

BOOK 64 PAGE 746
Cordova Recording District

KADCO IN SITU COAL RESOURCE PURCHASE AREA

Legal Description of Property

(Copper River Meridian)

T. 17 S., R. 7 E.

Sections; 2 W2

3 E2, SW4

4 E2, SW4

10 all

11 W2

12 E2

14 W2

15 all

16 all

17 E2, SW4

20 all

21 all

22 all

27 W2

28 all

29 all.

T. 17 S., R. 8 E.

Sections; 4 W2W2

5 all

6 E2, SW4

7 all

8 all.

T. 18 S., R. 8 E.

Sections; 29 SW4, W2SE4

31 E2, SW4

32 W2, W2E2. ...

Exhibit 1
Page 1

97-12-11 12:44

98-12-11 12:44

United States
Department of
Agriculture

Forest Service

Alaska Region



RECEIVED.
CHUGACH ALASKA CORPORATION
LEGAL DEPARTMENT

Alaska Region

DRAWING TO SCALE

Routed to:

Received by:

Comment:

USDA Forest Service, Regional Office, P.O. Box 21628, Juneau, AK 99802

Cover Page

To: Mr. Michael E. Brown Fax No.: 907-563-8402

Unit: Chugach AK Corp. Verification No.: 907-563-8866

From: James A. Caplan Fax No.: 907-586-7840

Unit: Acting Regional Forester Verification No.: 907-586-8863

Remarks:

Letter and 8 enclosures attached.

Total number of pages (excluding cover): 19

Date Sent: 5/22/98 Time: 4:45 p.m.



May 21, 1998

Mr. Jim Wolfe
US Forest Service, Region 10
PO Box 21628
Juneau, AK 99802

RE: Telephone conference of May 18, 1998

Dear Mr. Wolfe:

Thank you for calling Monday to clarify my understanding of discussions that took place during the May 4, 1998 meeting at the EVOS Trustee Council office in Anchorage between the Trustee Council, Forest Service, National Wildlife Federation, the Korea Alaska Development Company (KADCO) and several persons representing individual interests. It appears that quite a bit of confusion and controversy has been created as a result of that meeting.

To summarize our telephone conversation: you acknowledged that the purpose of this meeting was to discuss a possible purchase of KADCO's interest in the coal underlying CAC's Carbon Mountain property. You also acknowledged that discussion took place regarding expansion of the boundary of spill affected area to encompass all or a portion of Chugach Alaska Corporation's (CAC) Carbon Mountain property. You stated that this boundary expansion would be to enable the Trustee Council to fund the purchase of KADCO's coal interests underlying CAC's property.

You further acknowledged that this meeting included considerable discussion about methods that could be employed to frustrate, and ultimately stop, CAC's access and development plans for its Carbon Mountain property. You stated that during this meeting you directed that the Forest Service conduct a Biological Evaluation (BE) to determine if any species affected by the Exxon Valdez oil spill inhabit the easement corridor or CAC's property. You assured me that it is very unlikely that the Trustee Council will be successful in extending the boundary; but you felt obligated to conduct the BE because the Trustee Council and environmental interests had requested it twice.

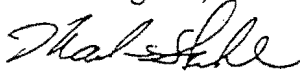
In response to my inquiry about the process by which the Trustee Council can modify the boundary of the spill affected area, you replied that the Trustee Council can make whatever modifications it desires upon unanimous vote of its six members.

Mr. Jim Wolfe
US Forest Service, Region 10

May 21, 1998

I appreciate your willingness to discuss this issue with me. I can be reached at (907) 261-0239 if you wish to discuss this or any other matter.

Best regards,



Mark Stahl, Manager
Lands & Resources Department

cc: Michael E. Brown
Peter Giannini

CAC/LND/844.500

Dear Ms. McCammon:

I am a fisherman living and working in the Cordova area.

When I was younger and came up to Alaska on halibut schooners the old timers would say "Look kids, there's the gates to Halibut Heaven!" Those yearly gates were, of course, Cape St. Elias. Although we were always far offshore, one could still look inward and see the cleft in the mountains where the Copper River undoubtedly ran, and through the ever present clouds, mountains and rivers without end. Even then we knew that once past the Cape this was a distinct ecosystem.

Now you have the choice of including the Carbon Hills as part of PWS and hence available for restoration funds under EVOS. I would heartily agree with this. The entire ecosystem is unique, from the Bering Glacier that surges every 25 years, to the wandering nomad bear, to the flourdeum through devils club and slide

01/03/80 12:00 PM 2 001 123 1234
elder thickets, this area is worthy
of further study and protection. Please
purchase the surface & subsurface
interests for the Chugach Native
Properties!!!

Yours,
Peter Zachary

gen. del.
Cordova, AK 99574
907 - 424 - 5775

To

Exxon Valdez Oil Spill
Trustee Council

40 Molly McCammon

907-276-7178

FROM:

Peter Zachara

give me info from
the report

Rebecca Williams

From: Dennis D. Howard
Int: Thursday, July 09, 1998 11:24 AM
To: Rebecca Williams
Subject: EVOS Reserve

Below is the result of your feedback form. It was submitted by
Dennis D. Howard (afddh@uaa.alaska.edu) on Thursday, July 9, 1998 at 11:24:23

Opinion: Dear EVOS Trustee Council: I support EVOS funding for establishing
research endowments and research chairs at the University of Alaska!

REMOTE_HOST: 137.229.104.145



ALASKA NATIVE HARBOR SEAL COMMISSION

Resolution 98-01

Resolution in support of the Community-Based Harbor Seal Management and Biological Sampling (#99245) and Community-Based Harbor Seal Research (#99444) proposals submitted for EVOS funding.

**BOARD OF
DIRECTORS**

Harold Martin
Chair
Southeast Region

Mitch Simeonoff
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Lillian Elvsaa
Sec'y / Treas.
Inlet Region

Mark Snigaroff
Aleutian/Pribilof

Norman Vlasoff
Chugach Region

Whereas, The Alaska Native Harbor Seal Commission (ANHSC) was formed by Federally Recognized Coastal Alaska Native Tribes to protect and conserve the harbor seal (*phoca vitulina*) as an important subsistence resource.

Whereas, The Alaska Native Tribes have a continuous relationship and dependence on the marine resources within the customary and traditional territory of the tribes from time immemorial.

Whereas, The *Exxon Valdez Oil Spill (EVOS)* caused extensive damage to the marine ecosystem and caused an interruption of the subsistence lifestyle of Alaska Natives.

Whereas, The harbor seal as a subsistence resource, was injured and has not recovered.

Whereas, The *EVOS* Trustee Council has been charged to administer \$900 million to restore the resources injured by the spill and the reduced or lost services (human uses) they provide.

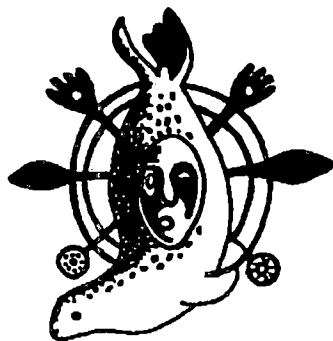
Whereas, the hunters of the spill impacted areas, in a effort to aid in the recovery of the harbor seal, have developed and designed a research project that utilizes their generations of knowledge, common sense, trained expertise of observance, skilled seamanship, as well as their historical geographical knowledge of the area and weather conditions.

Whereas, The Board of Directors of ANHSC met on March 28, 1998 and has reviewed, and support the proposals to continue the biosampling project in their respective areas and to initiate community based research.

Now Therefore be it resolved, that the Alaska Native Harbor Seal Commission board of directors fully supports and endorses the objectives set forth in these proposals submitted to the *EVOS* Trustee Council dated April 15, 1998 for funding in FY99.

Dated this 26 day of May 1998.

Signed: Harold Martin Chairman: Lillian Elvsaa Sec./Treas.
By Norman Vlasoff By [Signature]



ALASKA NATIVE
HARBOR SEAL COMMISSION

FAX: TO Keri Hile 5-26-98
TC. Office

Dear Keri,

BOARD OF
DIRECTORS

Harold Martin
Chair
Southeast Region

Mitch Simeonoff
Vice-Chair
Kodiak Region

Lillian Elvsaas
Sec'y / Treas.
Cook Inlet Region

Mark Snigaroff
Aleutian/Pribilof

Norman Vlasoff
Chugach Region

Thank you for informing
me of the upcoming PAB &
TC. meetings.

Please run this by Molly
to see if this could go into
their packets.

Thank you,
Monica Riedel

May 24, 1998
Even R. Evanson
P.O. box BSW
Cordova AK, 99574

TC per h. 1
2.12 to Sa 2.4
4.17 4

RECEIVED

JUN 01 1998

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL

Ms. Molly Macammon, Executive Director
Exxon Valdez Oil Spill Trustee Council
645 G Street, Suite 401
Anchorage AK, 99574

Dear Ms. Macammon:

I am writing to thank the council for their continued support of the Youth Area Watch program. Although my participation in it was somewhat more limited this year I still did learn some valuable things about oceanographic, meteorological, and restoration research on the several cruises and through the course of taking daily weather observations at my home. A very informative offshoot of YAW for me was an internship at Auke Bay Laboratories in Juneau last fall arranged by some of the researchers (Pat Harris and Jeff Short) who I met in this program. There I learned more about and did a good share of real scientific work and learned about other oil spill related research. (Particularly the work of Alex Werthiemer and Ron Heinz - the effects of oiling on juvenile pink salmon).

I will probably not be involved as much, if at all with program next year to make room for new students who have not yet gained these valuable experiences. I sincerely hope the council will make this important educational tool a high priority next year and for as long into the future as is possible.

Sincerely,

Even R. Evanson
Even R. Evanson