11.11.03

11.11.03

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178

AGENDA
EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL MEETING **2/24/00**
February 29, 2000 @ 1 p.m. 11:32 am
645 G STREET, ANCHORAGE

DRAFT

Trustee Council Members:

BRUCE BOTELHO/CRAIG TILLERY
Attorney General/Trustee
State of Alaska/Representative

MICHELE BROWN
Commissioner
Alaska Department of Environmental Conservation

MARILYN HEIMAN
Special Assistant to the Secretary for Alaska
U.S. Department of the Interior

DAVE GIBBONS
Trustee Representative
U.S. Department of Agriculture
Forest Service

STEVE PENNOYER
Director, Alaska Region
National Marine Fisheries Service

FRANK RUE
Commissioner
Alaska Department of Fish & Game

State Chair

1. Call to Order 1 p.m.
   - Approval of Agenda
   - Approval of January 31, 2000 meeting notes

2. Executive Director's Report - Molly McCammon
   - Administrative Issues
     - Financial Report
     - Project Status Report

3. Public Comment Period - 1:10

4. Deferred FY2000 Work Plan Projects* - Molly McCammon
   - 00423 NVP Sea Otters
   - 00396 Sharks

5. Draft Investment Policies*

Possible Executive Session to discuss Koniag

* indicates tentative action items

Adjourn - 3 p.m.

raw

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178

TRUSTEE COUNCIL MEETING ACTIONS

January 31, 2000 @ 10 a.m.

By Molly McCammon
Executive Director

DRAFT

Trustee Council Members Present:

Dave Gibbons, USFS
Marilyn Heiman, USDOI
*Steve Pennoyer, NMFS
Frank Rue, ADF&G
●Marianne See, ADEC
●Craig Tillery, ADOL

* Chair
In Anchorage: Gibbons, Heiman, Pennoyer, Rue, See, and Tillery.

● Alternates:
Marianne See served as an alternate for Michele Brown for the entire meeting.
Craig Tillery served as an alternate for Bruce Botelho for the entire meeting.

Meeting convened at 10:13 a.m.

1. Approval of the Agenda

APPROVED MOTION: Approved the Agenda unanimously.

2. Approval of the Meeting Minutes

APPROVED MOTION: Approved December 16, 1999 Trustee Council meeting notes. Motion by Gibbons, second by Rue.

Public comments received from two individuals from Anchorage.

BREAK Off Record (11:15 a.m.)
On Record (11:40 a.m.)

3. Executive Session

APPROVED MOTION: Adjourn into Executive Session to discuss the Executive Director's evaluation, habitat protection and legal issues relating to the consent decree. Motion by Tillery, second by See.

Off Record (12:07 p.m.)
On Record (1:17 p.m.)

DRAFT

4. Deferred FY2000 Work Plan Projects

APPROVED MOTION: As with FY2000 Projects approved in August and December 1999, the following projects are adopted with these conditions: If a principal investigator has an overdue report from the previous year, no funds may be expended on a project involving that PI, unless the report is submitted or a schedule for submission has been approved by the Executive Director. A project's lead agency must demonstrate that requirements of NEPA are met before any project funds may be expended with the exception of funds spent to prepare NEPA documentation. Motion by Rue, second by Gibbons.

APPROVED MOTION: Project 00256B Solf Lake Sockeye Salmon Stocking - Fund $159,500 to fund construction of a fish pass to allow fish back into Solf Lake and for stocking the lake. Motion by Rue, second by See.

APPROVED MOTION: Project 00396 Salmon Shark, Sleeper Shark, Spiny Dogfish - Defer until further information is presented at the February 2000 Trustee Council meeting. Motion by Tillery, second by Heiman.

APPROVED MOTION: Project 00478 Testing Satellite Tags - Fund $106,100 for FY2000 contingent on a revised budget and detailed project description. Motion by Rue, second by Heiman.

APPROVED MOTION: Project 00481 Documentary on Intertidal Resources - Fund $8,600 to begin the pre-production portion of this project. Motion by Heiman, second by See.

5. Eyak Proxy Vote Costs

APPROVED MOTION: Authorized $29,854 of documented expenses, to be considered as part of the purchase price, incurred by Eyak Corporation associated with the additional ratification vote. Motion by Rue, second by Gibbons.

6. FY2001 Work Plan Funding Targets

APPROVED MOTION: Approved the target of $6,000,000 for the FY2001 Work Plan. Motion by Rue, second by Gibbons.

7. Small Parcel

APPROVED MOTION: All small parcel funds currently earmarked will expire June 15, 2000 when the Trustee Council will review the entire Small Parcel Program, unless agreements with landowners are reached prior to that time. Motion by Tillery, second by Rue.

BREAK Off Record (2:50 p.m.)
On Record (3:04 p.m.)

DRAFT

Meeting adjourned at 4:08.

raw

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

THROUGH: Molly McCammon
Executive Director

FROM: Traci Cramer
Administrative Officer

DATE: February 16, 2000

RE: Financial Report as of January 31, 2000

Attached is the Statement of Revenue, Disbursements and Fees, and accompanying notes for the *Exxon Valdez* Joint Trust Fund for the settlement period ending September 30, 2002, as of January 31, 2000. The following is a summary of the information incorporated in the notes and contained on the statement.

Liquidity Account Balance	$58,970,997	
Plus: Other Adjustments (Note 5)	7,165,882	
Less: Restoration Reserve Adjustment (Note 6)	-57,912,016	
Liquidity Fund Balance		$8,224,863
Restoration Reserve Accrued Value	$38,970,769	
Plus: Liquidity Fund Adjustment (Note 6)	57,912,016	
Restoration Reserve Balance		$96,882,785
Joint Trust Fund as of January 31, 2000		**$105,107,648**
Plus: Future Exxon Payments (Note 1)	$140,000,000	
Less: Reimbursements (Note 3)	-7,500,000	
Less: Commitments (Note 7)	-80,544,621	
Uncommitted Balance		$51,955,379
Joint Trust Fund as of September 30, 2002		**$157,063,027**

Attachments

cc: Agency Liaisons
Bob Baldauf

NOTES TO THE STATEMENT OF REVENUE, DISBURSEMENTS AND FEES
FOR THE *EXXON VALDEZ* JOINT TRUST FUND
FOR THE SETTLEMENT PERIOD ENDING SEPTEMBER 30, 2002
As of January 31, 2000

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

Received to Date	$760,000,000
Future Payments	$140,000,000

2. Interest Income - In accordance with the MOA, the funds are deposited in the United States District Court, Court Registry Investment System (CRIS). All deposits with CRIS are maintained in United States government treasury securities with maturities of 100 days or less. Total earned since the last report is $259,908.

3. Reimbursement of Past Costs - Under the terms of the agreement, the United States and the State are reimbursed for expenses associated with the spill. The remaining reimbursements represent that amount due the State of Alaska.

4. Fees – CRIS charges a fee of 5% of earnings for cash management services. Total paid since the last report is $12,995.

5. Other Adjustments - Under terms of the Agreement, both interest earned on previous disbursements and prior years unobligated funding or lapse are deducted from future court requests. Unreported interest and estimated lapse is summarized below.

	Interest	Lapse
United States	$687,389	$2,663,228
State of Alaska	$1,966,597	$1,848,668

6. Restoration Reserve/Liquidity Fund Adjustment – Includes the $12,000,000 transfer approved for Fiscal Year 1998, plus $1,425,000 in interest accrued since September 15, 1997, the $12,000,000 transfer approved for Fiscal Year 1999, plus $825,000 in interest accrued since September 15, 1998, and $12,000,000 transfer approved for Fiscal Year 2000, plus $225,000 in interest accrued since September 15, 1999. The proceeds from the securities that matured on November 15, 1998 and November 15, 1999 were deposited to the Liquidity Fund have also been included. This includes $18,627,865, plus $562,977 in interest, less $37,914 in fees. Also included is $284,088 for fees that were assessed against the Restoration Reserve prematurely and deposited in the Liquidity Fund.

7. Commitments - Includes $2,711,000 for the Archaeological Repository, $274,200 for the Fiscal Year 2000 Work Plan, $29,854 for the Eyak Proxy Vote, and $198,000 for a number of small parcel acquisitions and the following land payments.

Seller	Amount	Due
Afognak Joint Venture	$23,025,833	October 2000
Eyak	$18,000,000	September 2000 through 2002
Shuyak	$8,000,000	October 2000 through 2001
Shuyak	$11,805,734	October 2002
Koniag, Incorporated	$16,500,000	September 2002

STATEMENT OF REVENUE, DISBURSEMENT, AND FEES
***EXXON VALDEZ* OIL SPILL JOINT TRUST FUND**
As of January 31, 2000

	1997	1998	1999	To Date 2000	Cumulative Total
REVENUE:					
Contributions: (Note 1)					
Contributions from Exxon Corporation	70,000,000	70,000,000	70,000,000	0	760,000,000
Less: Credit to Exxon Corporation for Deposit of Maturing Securities			9,095,002	9,532,863	(39,913,688) 18,627,865
Total Contributions	70,000,000	70,000,000	79,095,002	9,532,863	738,714,177
Interest Income: (Note 2)					
Exxon Corporation escrow account					831,233
Joint Trust Fund Account	2,971,070	2,673,585	2,124,921	888,523	24,037,839
Total Interest	2,971,070	2,673,585	2,124,921	888,523	24,869,072
Total Revenue	**72,971,070**	**72,673,585**	**81,219,923**	**10,421,387**	**763,583,249**
DISBURSEMENTS:					
Reimbursement of Past Costs: (Note 3)					
State of Alaska	5,000,000	3,750,000	3,750,000	0	99,059,288
United States	0	0	0	0	69,812,045
Total Reimbursements	5,000,000	3,750,000	3,750,000	0	168,871,333
Disbursements from Liquidity Account:					
State of Alaska	17,846,130	15,686,600	62,457,990	1,235,800	252,171,718
United States	60,101,802	39,468,461	32,676,850	100,500	232,850,133
Transfer to the Restoration Reserve	12,449,552				48,445,783
Total Disbursements	90,397,484	55,155,061	95,134,840	1,336,300	533,467,634
FEES:					
U.S. Court Fees - Liquidity Account (Note 4)	254,221	199,946	250,528	44,426	2,273,285
Total Disbursements and Fees	**95,651,705**	**59,105,007**	**99,135,368**	**1,380,726**	**704,612,252**
Increase (decrease) in Liquidity Account	**(22,680,635)**	**13,568,578**	**(17,915,445)**	**9,040,660**	**58,970,997**
Liquidity Account Balance, beginning balance	76,957,839	54,277,204	67,845,782	49,930,337	
Liquidity Account Balance, end of period	54,277,204	67,845,782	49,930,337	58,970,997	
Other Adjustments: (Note 5)					7,165,882
Restoration Reserve Adjustment: (Note 6)					(57,912,016)
Liquidity Fund Balance					8,224,863
Restoration Reserve Balance					96,882,785
Joint Trust Fund as of June 30, 1999					**105,107,648**
Future Exxon Payments (Note 1)					140,000,000
Reimbursements (Note 3)					(7,500,000)
Commitments: (Note 7)					(80,544,621)
Joint Trust Fund as of September 30, 2002					**157,063,027**

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

FROM: Sandra Schubert
Restoration Director

THROUGH: Molly McCammon
Executive Director

DATE: February 23, 2000

RE: Quarterly Project Status Summary -- December 31, 1999

This memorandum summarizes the status of reports for the quarter ending December 31, 1999, for all restoration projects funded by the Trustee Council during 1992, 1993, 1994, 1995, 1996, 1997, 1998, and 1999. The memorandum also includes progress updates for 2000 projects and the status of the 22 NRDA reports that were not final at the time the settlement agreement was reached.

Attachment A summarizes the status of project reports (including NRDA 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 October-December quarter for all projects underway in FY 00.

As of December 31, 1999, a total of 309 restoration project reports had been peer reviewed and accepted by the Chief Scientist (this is up from 301 reports accepted as of September 30, 1999). Once accepted by the Chief Scientist, reports are submitted to the Alaska Resources Library and Information Services (ARLIS). As of December 31, 284 reports were available to the public through ARLIS and other libraries around the state (this is up from 269 reports available as of September 30, 1999). Please contact the Restoration Office or ARLIS if you would like a list of the reports that are currently available to the public.

Status of 1992 Project Reports as of December 31, 1999

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.)

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
72	1	2	0

Status of FY 93 Project Reports as of December 31, 1999

A total of 28 final reports are being produced on projects funded in the 1993 Work Plan.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
25	1	1	1

Status of FY 94 Project Reports as of December 31, 1999

A total of 37 final reports are being produced on projects funded in the FY 94 Work Plan.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
36	1	0	0

Status of FY 95 Project Reports as of December 31, 1999

A total of 52 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.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
48	2	1	0

Status of FY 96 Projects as of December 31, 1999

A total of 51 reports are being produced on projects funded in the FY 96 Work Plan.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
45	2	1	2

Status of FY 97 Projects as of December 31, 1999

A total of 54 reports are being produced on projects funded in the FY 97 Work Plan.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
42	5	7	0

Status of FY 98 Projects as of December 31, 1999

A total of 48 reports are being produced on projects funded in the FY 98 Work Plan.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
16	13	15	4

Status of FY 99 Projects as of December 31, 1999

For most FY 99 projects, reports are due April 15, 2000. To date, 8 reports have been submitted for peer review; one of these has been accepted by the Chief Scientist and is available to the public at ARLIS.

Status of FY 00 Projects as of December 31, 1999

A project-by-project summary of activities conducted during the October-December quarter is presented in **Attachment C**.

Status of NRDA Reports as of December 31, 1999

A total of 22 NRDA reports that were not final at the time the settlement agreement was reached are in the process of being finalized.

Reports Available to Public at ARLIS	Reports Accepted by Chief Scientist but Not Yet Available to Public	Reports in Progress	No Report Yet Submitted
19	0	2	1

ATTACHMENT A

Summary of Project Report Status as of December 31, 1999

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	0	2	24	26
ADNR	1	0	0	1	1
DOI	33	0	0	33	33
NOAA	11	0	0	11	11
USFS	2	0	0	2	2
TOTAL	**75**	**0**	**2**	**73**	**72**

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	0	2	2
ADFG	12	1	1	10	10
ADNR	0	0	0	0	0
DOI	9	0	0	9	9
NOAA	3	0	0	3	3
USFS	2	0	0	2	1
TOTAL	**28**	**1**	**1**	**26**	**25**

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	5
NOAA	5	0	0	5	5
USFS	4	0	0	4	4
TOTAL	**37**	**0**	**0**	**37**	**36**

ATTACHMENT A

Summary of Project Report Status as of December 31, 1999

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	4	0	0	3	4
ADFG	26	0	1	25	24
ADNR	1	0	0	1	1
DOI	7	0	0	7	7
NOAA	8	0	0	8	8
USFS	6	0	0	6	4
TOTAL	**52**	**0**	**1**	**50**	**48**

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	0	1	0
ADFG	27	2	1	24	24
ADNR	3	0	0	3	3
DOI	4	0	0	4	3
NOAA	9	0	0	9	9
USFS	7	0	0	6	6
TOTAL	**51**	**2**	**1**	**47**	**45**

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	2
ADFG	28	0	6	22	22
ADNR	4	0	0	4	3
DOI	6	0	0	6	4
NOAA	8	0	0	7	8
USFS	6	0	1	6	3
TOTAL	**54**	**0**	**7**	**47**	**42**

ATTACHMENT A

Summary of Project Report Status as of December 31, 1999

1998 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	0	0
ADFG	21	2	6	13	8
ADNR	3	0	1	2	1
DOI	8	1	2	5	0
NOAA	11	0	3	8	6
USFS	4	1	2	1	1
TOTAL	**48**	**4**	**15**	**29**	**16**

NRDA REPORT COMPLETION

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	17	0	2	15	15
DOI	2	1	0	1	1
NOAA	2	0	0	2	2
TOTAL	**22**	**1**	**2**	**19**	**19**

Overdue Reports (as of 2/22/00)

Agency	Project Number	PI	Final or Annual	Project Title	Status of Report
ADEC	99514	See	Final	Lower Cook Inlet Waste Management Plan	Project schedule delayed. Plan/report originally due 2/28/99; now expected 3/00.
ADFG	FS13	Baker	Final	Effects of hydrocarbons on bivalves	Peer reviewed; returned to PI for revision 11/11/98
ADFG	93033-1	Rothe	Final	Harlequin duck - Afognak habitat assessment/PWS production	Peer reviewed; returned to PI for revision 11/14/95; most recent due date was 7/1/98
ADFG	93033-2	Rothe	Final	Harlequin restoration	Never submitted; most recent due date was 7/1/98
ADFG	96258A-1	Tarbox	Final	Sockeye: Kenai	Never submitted; was due 1/1/98 (with manuscript)
ADFG	96258A-2	Swanton	Final	Sockeye: Kodiak	Never submitted; was due 10/30/97
ADFG	97165	Seeb	Final	Herring genetics	Peer reviewed; returned to PI for revision 6/29/99
ADFG	97254	Edmundson	Final	Delight & Desire lakes	Peer reviewed; returned to PI for revision 11/2/98
ADFG	98196	Habicht	Final	Pink salmon genetics	Never submitted; was due 4/15/99
ADFG	98320	Cooney, et al	Final	SEA	Never submitted; was due 6/15/99 (all chapters now at ADFG being prepared for submittal to Chief Scientist)
ADFG	99252-1	L. Seeb	Final	Genetics project: pollock component	Never submitted; was due 9/30/99
ADFG	99252-2	L. Seeb	Final	Genetics project: black rockfish component	Never submitted; was due 1/31/00
ADFG	99311	Kline	Final	Herring productivity	Never submitted; was due 9/30/99.
ADNR	98180	Weiner	Annual	Kenai River restoration	Peer reviewed; returned to PI for revision 8/23/99
DOI	98286	Henrichs	Final	Elders/Youth Conference	Never submitted; was due 9/30/98
NOAA	99361	Allen	Video	Dynamic graphical techniques	Never submitted; was due 9/30/99
NOAA	99468	Thomas	Final	Acoustic target strength	Never submitted; was due 11/30/99
USFS	98145	Reeves	Final	Cutt/dolly populations	Never submitted; was due 9/30/99
USFS	99339-2	Suring	Final	Human use model & recommendations	Never submitted; was due 12/31/99, now expected 4/15/00
USFS	99381	Bishop	Final	Seabird colony status	Never submitted; was due 9/30/99

Overdue Reports (as of 2/22/00)

The following reports were submitted to the Chief Scientist for peer review more than 6 months ago:

98162	Marty, et al	Final	Herring disease	Submitted for peer review 8/16/99
98247	McCullough	Annual	Kametolook River	Submitted for peer review 6/29/99
98256B	Gillikin	Annual	Solf Lake	Submitted for peer review 4/28/99
98291	See	Final	Chenega shoreline oiling	Submitted for peer review 6/25/99
98347	Heintz	Annual	Diet composition	Submitted for peer review 6/8/99

DRAFT

ATTACHMENT C

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00007A-CLO	Archaeological Index Site Monitoring	D. Reger/ADNR	ADNR

Project Tasks to be Completed this Quarter

by April 15
Submit final report for peer review
Submit ms. for Restoration Notebook series

by June 30
Move documents and collections to repositories

Conferences
Alaska Anthropological Association (March 2000) - present summary of data collected over life of EVOS archaeology porgram with reference to final and annual reports

Proj.No.	Project Title	Proposer	Lead Agency
00012A-BAA	Photographic and Acoustic Monitoring of Killer Whales in Prince William Sound and Kenai Fjords	C. Matkin/North Gulf Oceanic Society	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Input 1999 data into GIS system
UNDERWAY-Analyze photos from 1999 fieldwork
UNDERWAY-Complete analysis of pedigree and allele frequency data
UNDERWAY-Conduct acoustic analysis of killer whale calls from previous year
UNDERWAY-Continue winter recordings at ASLC from remote hydrophone

Jan - March
-Continue winter recordings at ASLC from remote hydrophone

April-June
-Annual report due (4/15/00)

July-Sept
-Conduct fieldwork

Conferences
DONE-Society for Marine Mammalogy, Maui, HI (11/28-12/3/99) - present paper on changes in pods 1984-99

Publications
Definition of acoustic dialects
Contaminant results

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00025-CLO	**Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators (NVP)**	**L. Holland-Bartels/ USGS-BRD, et al**	**DOI**

Project Tasks to be Completed this Quarter

Dec
UNDERWAY-Submit 10 ms. intended for feature article to journal

6 mo. after final report is peer reviewed
Complete revision of final report

Sept
Revised journal submission

Additional publications
1. O'Clair, et al - mussel population structure
2. Lindeberg, et al - mussel abundance and growth
3. Millstein, et al - mussel growth comparisons
4. Esler, et al - survival of radio-marked harlequins
5. Esler, et al - molting harlequins
   Esler, et al - winter survival of female harlequins
7. Bowman, et al - winter harlequin densities
8. Trust, et al - P450 in seaducks
9. Mulcahy, et al - harlequin blood chemistry
10. Snyder, et al - P450 in sea otters
11. Seiser, et al - pigeon guillemot blood parameters
12. Seiser, et al - pigeon guillemot reproductive success
13. Taylor, et al - fecal porphyrin profiles in river otters

00048-BAA	**Publication: Historical Analysis of Sockeye Salmon Growth Among Populations Affected by the Oil Spill and Large Spawning Escapements**	**G. Ruggerone/NRC, Inc., D. Rogers/Univ. Wash.**	**NOAA**

Project Tasks to be Completed this Quarter

Dec
DELAYED-Submit papers for publication:
1. Effects of large escapements on sockeye growth and returns
2. Marine growth and returns reflect 1970s ocean regime shift

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00052	Community Involvement/Traditional Ecological Knowledge	P. Brown- Schwalenberg/CRRC	ADFG

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Natural resource training workshop for community facilitators and natural resource specialists
UNDERWAY-Work with RO to disseminate and receive feedback on GEM

Jan-March
DONE-Second natural resource training workshop for community facilitators and natural resource specialists
-Develop new projects with communities

April 15
-Submit annual report

By Sept. 30
-Identify species on which to develop population and monitoring programs at the local level
-Pilot project communities talk to landholders adjacent to villages regarding stewardship and management programs
-Develop draft GEM Community Integration Plan

Ongoing
-Work with communities who are not under pilot program to develop tribal natural resource mgt. programs

DRAFT

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Proj.No.	Project Title	Proposer	Lead Agency
00064-CLO	**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
DELAYED - Analyze 99 aerial survey data
DELAYED - Analyze D20 samples
DONE - Presentions on fatty acids (REPLACED WITH PRESENTATION ON COMPARATIVE PUP PHYSIOLOGY/DIVING - BURNS), seal diving (FROST), and Bayesian trend count analysis (VER HOEF) at Marine Mammal Conference, Maui, HI (Nov.)
NOT INVITED; DON'T KNOW IF IT OCCURRED; OTHER ADFG STAFF NOW REPRESENTING ALL ADF&G HARBOR SEAL STUDIES - Attend ANHSC meeting (Nov?)

Jan-Mar
Retrieve 99 Argos SDR data
Analyze 99 seal/prey fatty acid samples
Develop fatty acids model
Coordination meeting for ADFG and NOAA harbor seal studies
Submit ms. on PWS seal movements
esentation at EVOS annual workshop

April-June
Final SDR tag data analysis
Final trend analysis 1989-99
Final fatty acid analysis
Submit ms. on 1989-99 trend analysis using Bayes method

July-Sept
Conduct aerial surveys at 25 sites in PWS
Submit final report with recommended monitoring scheme
Submit ms. on fatty acids
Submit ms. on diving and movement of seal pups in PWS

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Proj.No.	Project Title	Proposer	Lead Agency
00090-CLO	Monitoring of Oiled Mussel Beds in Prince William Sound	P. Harris, C. Brodersen/NOAA	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Complete hydrocarbon analyses

Jan-Mar
-EVOS Annual Workshop

April-June
-Submit final report (4/15)

July-Sept
-Prepare ms:
1. Effectiveness of manual restoration of mussel beds
2. Natural recovery of mussel beds impacted by EVO

100	Public Information, Science Management, and Administration	All Trustee Council Agencies	ALL

Project Tasks to be Completed this Quarter

One component of this project is ARLIS. For the quarter ending 12/31/99, ARLIS staff received 5,827 visitors and 1,075 incoming calls, responded to 3,270 requests for in-depth information, 370 of which were EVOS questions (routine requests for EVOS documents are now handled by the Restoration Office), and processed 2,184 interlibrary loans (50 for EVOS materials). 17,100 people have used the ARLIS web site since 2/13/99, including a list of links to oil spill related sites updated in October. ARLIS staff reviewed, approved, and distributed 9 final reports and 14 annual reports; 296 reports are now available. The ARLIS management team and Founders Board met to continue the strategic planning process begun in September.

00126	Habitat Protection and Acquisition Support	C. Fries/ ADNR, K. Holbrook/USFS, G. Elison/DOI	ADNR

Project Tasks to be Completed this Quarter

Tasks performed Oct-Dec:
Continued work on numerous small parcel acquisitions. Completed Phase II of AJV. Second phase of Eyak ongoing. Tatitlek small parcels are being appraised. Work proceeding on Old Harbor exchange.

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Proj.No.	Project Title	Proposer	Lead Agency
00127	Tatitlek Coho Salmon Release	G. Kompkoff/Tatitlek IRA Council	ADFG

Project Tasks to be Completed this Quarter

NOTE: PROJECT APPROVED 12/16/99.

April-June
Submit annual report (April 15)
Transport smolt to Boulder Bay and place in net pens (May)
Release smolt into Boulder Bay (June)

July-Sept
Egg take (August)

Proj.No.	Project Title	Proposer	Lead Agency
00139A2	Port Dick Creek Tributary Restoration and Development	W. Bucher/ADFG	ADFG

Project Tasks to be Completed this Quarter

Throughout year
-Monitor hydrologic parameters
-Monitor bedload transport, accumulated sediments, and transport rates

Oct-Dec
DONE-Collect final riffle elevations, streambed scour and sedimentation data

Jan-March

April-June
-Submit final report (April 15)
-Submit journal article

July-Sept
- Address peer review / editorial comments

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Proj.No.	Project Title	Proposer	Lead Agency
00144A-CLO	Common Murre Population Monitoring	D. Roseneau/USFWS	DOI

Project Tasks to be Completed this Quarter

UPDATE NOT PROVIDED.

Oct-Dec
-FY 99 data analysis
-Trend analysis FY 89-97
-Submit ms. using FY 89-99 results (Dec. 15)

Jan-March
-EVOS Annual Workshop
-Present project results at PSG conference

April-June
-Submit final report (April 15)

July-Sept

00159	Surveys to Monitor Marine Bird Abundance in Prince William Sound During Winter and Summer 2000	B. Lance, D. Irons/USFWS	DOI

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Arrange logistics for winter survey

Jan-Mar
-Conduct winter survey in PWS

April-June
-Data analysis
-Arrange logistics for summer survey
-Submit annual report (4/15/00)

July-Sept
-Conduct summer survey in PWS

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Proj.No.	Project Title	Proposer	Lead Agency
00163-CLO	**Alaska Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska (APEX)**	**D. Duffy/Paumanok Solutions, et al**	**NOAA**

Project Tasks to be Completed this Quarter

by Sept 30
Submit final report

Manuscripts to be submitted in FY 00
A: Thedinga, et al. Distribution and abundance of forage fish
B: 1. Ostrand, et al. Murrelet and seabird foraging habitat
2. Ostrand, et al. Determining sand lance habitat through hydroacoustic data
3. Gotthardt, et al. Distribution of sand lance and burrowing habitat
4. Gotthardt, et al. Effects of climate variability on capelin
E: 1. Suryan, et al. Kittiwakes as indicators of forage fish availability
2. Suryan, et al. Diets and daily foraging activities of kittiwakes
3. Irons, et al. Use of feeding flocks by kittiwakes.
4. Benson, et al. Limitations of foraging effort of kittiwakes
F: 1. Golet, et al. Adult prey specialization affects on pigeon guillemots
2. Golet, et al. Factors limiting recovery of pigeon guillemot recovery
3. Golet, et al. Foraging site fidelity of pigeon guillemots
4. Golet, et al. Effect of prey selection on foraging patterns in pigeon guillemots
5. Ballachey, et al. Assessment of exposure to oil in marine predators
6. Seiser, et al. Blood parameters of pigeon guillemot chicks
G: 1. Jodice, et al. Parental investment in black-legged kittiwakes
2. Jodice, et al. Parental energy expenditure in black-legged kittiwakes
J: 1. Kettle, et al. Common murre nesting dates at East Amatuli
2. Roseneau, et al. Timing of nesting at Barren Islands
3. Roseneau, et al. Black-leged kittiwake productivity and growth at Kachemak Bay
K. Roseneau, et al. Using halibut to sample forage fish
L: 1. Piatt. Long-term changes in the GOA marine ecosystem
2. Piatt. Long-term shifts in benthic commercial fishery species: a case study
3. Piatt. Pandalid shrimp declines in GOA: forage fish regime shift
M: 1. Piatt, et al. Response of seabirds to variation in food density
2. Drew, et al. Abundance of forage fish in lower Cook Inlet
3. Piatt, et al. Can seabirds recover from EVOS?
4. Abookire, et al. Structure and composition of fish communities
5. Speckman, et al. Spatial associations of seabirds and their prey
6. Shultz, et al. Common murres at Chisik, Gull, and Barren islands
7. Kettle, et al. Black-legged kittiwakes at Chisik, Gull, and Barren islands
8. Litzow, et al. Consequences of prey for breeding pigeon guillemots
9. Harding, et al. Horned puffins at Chisik Island
10. Kitaysky, et al. Stress response in common murres
11. VanPelt, et al. Diets of seabirds in lower Cook Inlet
12. Robards, et al. Monitoring of nearshore fish in Cook Inlet.
O: Kern & Ostrand. Resource selection by seabirds 1996-99
P: 1. Ainley, et al. Factors affecting occurrence patterns of black-legged kittiwakes
2. Ainely, et al. Factors affecting distribution and size of black-legged kittiwake colonies
3. Ford, et al. Model of foraging strategies of black-legged kittiwakes
R: 1. Kuletz, et al. Marbled murrelet: environmental factors and marine habitats
2. Kuletz, et al. Marbled murrelet foraging ranges and habitats
3. Kuletz. Marbled murrelet fledging
4. Kuletz, et al. Effects of prey on marbeld murrelet productivity
5. DeGange, et al. Marbled murrelet nesting
6. Marks, et al. Use of forested and unforested marbled murrelet nesting habitat

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Proj.No.	Project Title	Proposer	Lead Agency

S: 1. Purcell, et al. Competition among jellyfish and forage fish
2. Purcell, et al. Trends in scyphomedusae abundance
3. Purcell, et al. Hydromedusan populations
4. Purcell. Predation effects of scyphomedusae
5. Purcell, et al. Biomass comparisons among forage fish and jellyfish

T: None

Presentations at professional conferences:
E, G, I, M, Q: Joint American Ornithological Union/British Ornithological Society meeting in St. Johns, Newfoundland (August 14-19, 2000)

00169-CLO	**A Genetic Study to Aid in Restoration of Murres, Guillemots, and Murrelets in the Gulf of Alaska**	**V. Friesen/Queen's Univ., J. Piatt/USGS-BRD**	**DOI**

Project Tasks to be Completed this Quarter

Oct-Dec

n-March
nalyze data for common murres

April-June
-Submit annual report (4/15/00)
-Analyze data for murrelets
-Analyze data for guillemots
-Submit common murre ms. (6/30/00)

July-Sept
-Submit marbled murrelet ms. (8/31/00)

In FY 01 (to be completed with FY 00 funding)
-Submit guillemot ms. (10/31/00)
-Submit Kittlitz's murrelet ms. (12/31/00)
-Submit final report (4/15/01)

00180-CLO	**Kenai Habitat Restoration and Recreation Enhancement**	**M. Rutherford/ADNR**	**ADNR**

Project Tasks to be Completed this Quarter

April 15
-Submit final report

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Proj.No.	Project Title	Proposer	Lead Agency
00190	**Construction of a Linkage Map for the Pink Salmon Genome**	**F. Allendorf/Univ. Montana**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
ONGOING-Continue genetic analysis of fry from 1998 cohort
ONGOING-Perform genetic analysis of adults used in experimental matings to produce 1999 cohort

Jan-March
-

April-June
-Rear experimental progeny from 1999 cohort at Alaska SeaLife Center
-Submit annual report (4/15/00)

July-Sept
-Perform genetic analysis of 1999 cohort produced in experimental matings
-Begin analysis of returning sexually mature fish from the 1998 cohort

onferences
(unspecified)

00195	**Pristane Monitoring in Mussels**	**J. Short, P. Harris/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

NOTE: PROJECT APPROVED 12/16/99.

Oct-Dec
UNDERWAY-Analyze FY 99 samples

Jan-March
-Meet with PWS hatchery officials to coordinate sample collection in FY 00

April-June
-Submit annual report (April 15)
-Collect mussel samples

July-Sept
-Analyze 1999 samples for pristane

ublications

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Proj.No.	Project Title	Proposer	Lead Agency
00210	Youth Area Watch	R. DeLorenzo/Chugach School District	ADFG

Project Tasks to be Completed this Quarter

Oct-Dec
-School site orientations
DONE-Select students for participation
DONE-Provide protocol training to site teachers
DONE-Student orientation and training
DONE-Prepare weather station at each site
ALSO, STUDENTS ATTENDED HARBOR SEAL BIOSAMPLING TRAINING AND SUBMITTED PROPOSALS FOR LOCAL RESTORATION/RESEARCH PROJECTS

Jan-March
-Project coordinator send data to PIs (March 1)
-Site teacher follow-up training

April-June
-Project coordinator send data to PIs (June 1)
tudents complete project reports
ubmit annual report (4/15/00)

July-Sept
-

Ongoing
-Students participate in research activities
-Students maintain web site

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Proj.No.	Project Title	Proposer	Lead Agency
00225	Port Graham Pink Salmon Subsistence Project	E. McCollum/Port Graham IRA Council	ADFG

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

DONE-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

-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

apture hatchery broodstock

gg take

-Submit final report (9/30/00)

Proj.No.	Project Title	Proposer	Lead Agency
00245	Community-Based Harbor Seal Management and Biological Sampling	V. Vanek/ADFG, M. Riedel/Alaska Native Harbor Seal Commission	ADFG

Project Tasks to be Completed this Quarter

NO UPDATE RECEIVED.

Ongoing

-Biological sample collection

Oct-Dec

-Hold training sessions for biological sampling for new technicians

Jan-Mar

-Produce and distribute newsletter

April-June

-Submit annual report (April 15)

y-Sept

-

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Proj.No.	Project Title	Proposer	Lead Agency
00247	Kametolook River Coho Salmon Subsistence Project	J. McCullough, L. Scarbrough/ADFG	ADFG

Project Tasks to be Completed this Quarter

Oct-Dec

DONE-Capture adult coho and place in holding pens until salmon are ripe
DONE-Perform maintenance of instream incubation system and school aquarium
DONE-Conduct stream surveys
DONE-Conduct escapement surveys
DONE-Perform coho salmon egg take, fertilize eggs, place in incubation boxes
DONE-Sample salmon for genetic and pathology tests
UNDERWAY-Renew school aquarium FTP
DONE-Consult with teachers
DONE-Meet with school children and community to discuss project
DONE-Hatchery specialist conduct additional training for Perryville assistants and evaluate project
DONE-Status report of project to Alaska Board of Fisheries in Fairbanks
ALSO, PRESENTED PROJECT AT AMERICAN FISHERIES SOCIETY MEETING IN KODIAK

Jan-March

)NE-Transport eyed eggs to the aquarium
nalyze subsistence and commercial harvest data
DONE-Present talk and poster at Annual Workshop

April-June

-Review meeting with assessment team to evaluate the project
-Fry release from egg boxes
-Perryville students release aquarium fry
-Monitor incubation boxes
-Submit annual report (April 15)
-RPT meet in Chignik Bay to review status of project

July-Sept

-Monitor incubation boxes
-Conduct stream surveys

Proj.No.	Project Title	Proposer	Lead Agency
00250	Project Management	All Trustee Council Agencies	ALL

Project Tasks to be Completed this Quarter

N/A

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Proj.No.	Project Title	Proposer	Lead Agency
00256B	**Sockeye Salmon Stocking at Solf Lake**	**D. Gillikin/USFS, P. Shields/ADFG**	**USFS**

Project Tasks to be Completed this Quarter

PROJECT APPROVED 1/31/00.

Oct-Dec

Jan-March
-

April-June
-Award logistics contracts (USFS)
-Release second year of sockeye fry at Solf Lake (PWSAC)

July-Sept
-Conduct limnological sampling and prepare report (ADFG)
-Conduct egg take for FY 2000 stocking at Solf Lake (PWSAC)

ecember 1999 (FY 2000)
omplete survey and final design of fishway (USFS)

Proj.No.	Project Title	Proposer	Lead Agency
00263	**Assessment, Protection and Enhancement of Salmon Streams in Lower Cook Inlet**	**W. Meganack, Jr./Port Graham Corporation**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Monitor Windy Creek Left rearing ponds; conduct maintenance
DONE-Monitor Port Graham River fish pass; conduct maintenance

Jan-March
DONE-Present talk at Annual Workshop

April-June
-Maintain fish pass as needed
-Monitor use of rearing ponds by coho fry and smolt (May)

July-Sept
-Conduct salmon run surveys on Port Graham River
-Monitor fish pass and conduct maintenance as needed
-Monitor use of rearing ponds (Oct.)
-Submit final report (9/30/00)

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Proj.No.	Project Title	Proposer	Lead Agency
00273	**Scoter Life History and Ecology: Linking Satellite Technology with Traditional Knowledge to Conserve the Resource**	**D. Rosenberg/ADFG**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
ONGOING-Coordinate and plan community involvement, Youth Area Watch, and TEK
DONE-Attend synthesis workshops in communities
DONE-Meet with local subsistence harvesters
UNDERWAY-Arrange logistics, order equipment

Jan-March
-Reconnaissance surveys for scoter concentrations
-Capture birds for radio implants

April-June
-Submit annual report (April 15)
-Continue capture activities
-Monitor birds at ASLC
-Conduct surgical implants and attach VHF transmitters
  Release birds in PWS
  Conduct VHF tracking flights to measure mortality
-Monitor satellite transmitters

July-Sept
-Monitor movement of satellite transmitted birds
-Maintain web site

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Proj.No.	Project Title	Proposer	Lead Agency
00278	**Development of an Ecological Characterization and Site Profile for Kachemak Bay/Lower Cook Inlet**	**G. Seaman/ADFG**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec & Jan-March
UNDERWAY-Collect existing spatial data and include in GIS
DONE-Digitize new spatial data
UNDERWAY-Develop metadata for GIS
UNDERWAY-Serve GIS spatial data and associated metadata on the KBNERR web page
UNDERWAY-Complete bibliography
UNDERWAY-Provide narrative and spatial information to CSC

April-June
-Develop draft CD
-Train managers, researchers, and other users of the product
-User evaluation

July-Sept
-Make appropriate modifications based on user evaluation
Develop product maintenance plan
evelop Internet product
-Submit final products and report to Chief Scientist and Trustee Council (9/30/00)

00287-BAA	**Seabird-Oceanographic Relationships in the Northern Gulf of Alaska: Integration with NSF/NOAA Study GLOBEC**	**R. Day/ABR, Inc.**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec

Jan-Mar
-First cruise (March)

April-June
-Second cruise (April)
-Third cruise (May)

July-Sept

Also
-Fourth cruise (Oct.)
-Fifth cruise (Dec.)
nal report due April 15, 2001 (presumably contract will be written through this date)

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Proj.No.	Project Title	Proposer	Lead Agency
00290	**Hydrocarbon Data Analysis, Interpretation, and Database Maintenance**	**J. Short, B. Nelson/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

Ongoing
-Store samples
-Analyze data

April-June
-Submit annual report in the form of updated release of hydrocarbon data software (April 15)

Conferences
-Quality Assurance/Quality Control Annual (1999 intercomparison exercise) Meeting (Maryland, April 3, 2000)

00306-CLO	**Ecology and Demographics of Pacific Sand Lance in Lower Cook Inlet**	**J. Piatt/USGS-BRD**	**DOI**

Project Tasks to be Completed this Quarter

-Submit final report (by April 15)

-Submit ms. for publication (by Sept. 30) -- Robards, et al
1. Prediction of sand lance habitat using hydroacoustics
2. Changes in sand lance abundance
3. Geographic variability in sand lance growth
4. Variability in abundance of sand lance

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Proj.No.	Project Title	Proposer	Lead Agency
00320-BAA	**Sound Ecosystem Assessment (SEA): Publishing the Integrated Final Report and a Program Synthesis**	**J. Allen/PWSSC**	**NOAA**

Project Tasks to be Completed this Quarter

NOTE: PROJECT NOT YET AUTHORIZED DUE TO PI'S OVERDUE PRODUCTS FROM 99320 & 99361.

by 2/1/00
Manuscript package for FO reviewed by Dr. Pearcy
Final report copied and distributed by ADFG
Synthesis revised by authors

by 3/1/00
Reviewed package sent to FO for publication

by 9/1/00
Published volume ready for distribution

327	**Pigeon Guillemot Restoration Research at the Alaska SeaLife Center**	**D. Roby/Oregon State Univ.**	**DOI**

Project Tasks to be Completed this Quarter

STILL WAITING FOR REVISED DPD; PROJECT NOT YET AUTHORIZED

Oct-Dec

Jan-March

April-June

July-Sept

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Proj.No.	Project Title	Proposer	Lead Agency
00330-CLO	**Mass-Balance Model of Trophic Fluxes in Prince William Sound**	**D. Pauly/UBC**	**NOAA**

Project Tasks to be Completed this Quarter

NO UPDATE PROVIDED.

Oct-Dec
-Produce and distribute final CD-ROM
-Submit Hulbert, et al, ms. Ecological implications of increasing shark populations using ECOPATH

Jan-March
-Submit Purcell, et al, ms. Simulations of zooplanktivore populations using ECOPATH

00338	**Survival of Adult Murres and Kittiwakes in Relation to Forage Fish Abundance**	**J. Piatt/USGS-BRD**	**DOI**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Evaluate results of FY 99 work

Jan-Mar
-Arrange resighting logistics

April-June
-Arrange logistics
-Conduct field work
-Submit annual report (April 15)

July-Sept
-Compile resighting results; conduct data analysis

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Proj.No.	Project Title	Proposer	Lead Agency
00339-CLO	**Western Prince William Sound Human Use and Wildlife Disturbance Model**	**L. Suring/USFS, K. Murphy/USFWS**	**USFS**

Project Tasks to be Completed this Quarter

Oct-Dec

UNDERWAY-Synthesize literature on wildlife disturbance into draft management recommendations (Oct. 31)
UNDERWAY-Complete model of projections of future human use (Oct. 31)
UNDERWAY-Finalize management recommendations (Nov. 15)
DELAYED TO 4/15/00-Submit final report on projections of future human use and management recommendations (Dec. 31)
DESCRIPTION OF USE PATTERNS SUBMITTED TO CHIEF SCIENTIST 12/14/99

00340	**Toward Long-Term Oceanographic Monitoring of the Gulf of Alaska Ecosystem**	**T. Weingartner/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

ct-Dec

DONE IN OCT. AND DEC. BUT NOT IN NOV. DUE TO HARSH WEATHER ON POTENTIAL SAILING DATES-Monthly CTD surveys
DONE-Update homepage
SUBMITTED REQUEST FOR WIND FIELDS; NOT YET RECEIVED-Prepare wind fields and acquire meteordogical fields
DONE-Recover/deploy mooring (Nov/Dec)

Jan-March

-Monthly CTD surveys
-Update homepage

April-June

-Monthly CTD surveys
-Update homepage
-Submit annual report (4/15/00)

July-Sept

-Monthly CTD surveys
-Update homepage

Conferences

DONE; PRESENTED ON FRESHWATER VARIABILITY IN GOA - AGU/ASLO Ocean Sciences Meeting, San Antonio, TX (Jan. 2000)

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Proj.No.	Project Title	Proposer	Lead Agency
00341	**Harbor Seal Recovery: Controlled Studies of Health and Diet**	**M. Castellini/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Trial 4 of staggered feeding protocol (Sept-Dec)(molting)
DONE-Assimilation efficiency experiments

Jan-March
UNDERWAY-Trial 5 of staggered feeding protocol (Jan-April)(spring)

April-June
-Trial 6 of staggered feeding protocol (May-Aug.)(breeding)
-Assimilation efficiency experiments
-Submit annual report (4/15/00)

July-Sept
-Assimilation efficiency experiments

onferences
ONE-Presentation at Marine Mammal Conference, Maui, HI (Nov)

00347-CLO	**Fatty Acid Profile and Lipid Class Analysis for Estimating Diet Composition and Quality at Different Trophic Levels**	**R. Heintz/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Compile all FA and lipid data in working database
DONE-Complete chemical analysis of all samples
UNDERWAY FOR FUR SEAL DATA-Complete statistical analysis of temporal and life stage data

Jan-March
-Report on temporal scales of variability of forage fish FA profiles
-Submit ms. on spatial variability of FA

April-June
-Submit ms. on temporal variability of FA

July-Sept
-Submit final report (July)
-Submit ms. on life stage variations of FA

Conferences
emical Analysis Workshop
sh Symposium

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Proj.No.	Project Title	Proposer	Lead Agency
00348-CLO	**Responses of River Otters to Oil Contamination: A Controlled Study of Biological Stress Markers**	**M. Ben-David, T. Bowyer, L. Duffy/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Complete lab analyses

Jan-March
Attend EVOS Annual Workshop
Complete radio tracking

April-June
Complete ms. for publication:
1. Taylor, et al. Response to oil contamination: fecal porphyrins
2. Ormseth, et al. Effects of oil ingestion on passage rate and assimilation efficiency
3. M. Ben-David, et al. Post-release survival

July-Sept
Attend Wildlife Diseases Association meeting (Aug)

00360-BAA	The *Exxon Valdez* Oil Spill: Guidance for Future Research Activities	**C. Elfring/Polar Research Board, NRC**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Begin committee nomination process
UNDERWAY-Select committee
UNDERWAY-Compile background materials

Jan-Mar
DELAYED TO MAY/JUNE-First meeting: orientation and information gathering

April-June
Second meeting: information gathering and analysis of draft GEM plan

July-Sept
Third meeting: continue discussions, assignments, report preparation
Fourth meeting: deliberations of conclusions and recommendations

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Proj.No.	Project Title	Proposer	Lead Agency
00366	Improved Salmon Escapement Enumeration Using Remote Video and Time-Lapse Recording Technology	E. Otis/ADFG	ADFG

Project Tasks to be Completed this Quarter

NOTE: FUNDING APPROVED 12/16/99

Jan-March
-Purchase video equipment and materials
-Fabricate strongbox for video eqiupment
-Arrange logistics

April-June
-Deploy video equipment
-Operate weir camp (June-Aug)
-Review tapes

Aug-Sept
-Evaluate camera's performance against weir counts

00371	Effects of Harbor Seal Metabolism on Stable Isotope Ratio Tracers	D. Schell/UAF	ADFG

Project Tasks to be Completed this Quarter

Nov-Aug
UNDERWAY-Isolate amino acids from prey species and establish isotope ratios in any essential amino acids identified

March-July
-If necessary, implement alternate amino acid analysis via gas chromatography

April 15
-Submit annual report

Conferences
DONE-PI attend biennial marine mammal conference; graduate student present paper

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00374	**Coordination and Planning for Herring Research**	**B. Norcross/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

NOTE: PROJECT APPROVED 12/16/99.

Jan-Mar
-Receive all reports, papers, and proposals from EVOS
-Organize herring workshop; send invitations
-Conduct workshop (1 day Feb 21-26)

Apr-Sept
-Comparison with Atlantic herring
-Write report

00375-CLO	**Effect of Herring Egg Distribution and Ecology on Year-Class Strength and Adult Distribution**	**E. Brown, B. Norcross/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DELAYED TO HERRING 2000 IN FEB. 2000-Present analysis at Lowell Wakefield Symposium (Oct. 27-30)
DELAYED-Compile the list of biological indices to be compared to the model output; define apparent relationships to physical variables

April 15
Submit final report (DPD says by 2/28/00)

00379-CLO	**Assessment of Risk Caused by Residual Oil in Prince William Sound Using P450 Activity in Fishes**	**S. Jewett/UAF**	**ADFG**

Project Tasks to be Completed this Quarter

April 15
-Submit final report, which will consist of 1 manuscript

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00389	3-D Ocean State Simulations for Ecosystem Applications from 1995-98 in Prince William Sound	J. Wang/UAF	ADFG

Project Tasks to be Completed this Quarter

NOTE: PROJECT APPROVED 12/16/99.

Jan-Mar
-Complete tide simulation and validation with the 4 years' observation
-Attend Annual Workshop
-Complete preparing the forcing data of the 4 years

April-June

July-Sept
-Complete modeling of 1995-98
-Submit ms. to peer reviewed journal

Proj.No.	Project Title	Proposer	Lead Agency
)391	CIIMMS: Cook Inlet Information Management/Monitoring System	K. Zeiner/ADNR, J. Hock/ADEC	ADNR

Project Tasks to be Completed this Quarter

NOTE: PROJECT APPROVED 12/16/99.

Dec
DONE-Complete initial evaluation of CIIMMS prototype
-Review preliminary system specifications

Jan-March
-Finalize system specifications and implementation plan, including long-term O&M strategic plan
-Begin implementation of final system specifications

April-June

July-Sept
-Refine user interface

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00393-BAA	Prince William Sound Food Webs: Structure and Change	T. Kline/PWSSC	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec

Jan-March

April-June
-Prepare archived samples for mass spectometry
-Submit annual report (April 15)

July-Sept
-Complete mass spectometry at UAF
-Complete processing of new isotope data

Conference
($1,700 provided)

Proj.No.	Project Title	Proposer	Lead Agency
00401	Assessment of Spot Shrimp Abundance in Prince William Sound	C. Hughey/ Valdez Native Tribe, C. O'Clair/ NOAA	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Sample spot shrimp at ADFG sampling sites and 6 additional sites

Jan-March
-Process egg samples and analyze data on abundance, sex and size composition, number of egg-bearing females and fecundity

April-June
-Submit annual report (April 15)

July-Sept
-Arrange logistics for sampling cruise in Oct. 2000

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00407	Harlequin Duck Population Dynamics	D. Rosenberg/ADFG	ADFG

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Logistics

Jan-March
Conduct winter surveys (March)

April-June
Create databases, GIS
Analyze field data
Submit annual report (4/15/00)

July-Sept
Analyze field data

414-BAA	Development of a Web-Based System for Communicating Ecosystem Research Results to the Public	J. Allen/AK Digital Graphics	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Content selection
UNDERWAY-Draft narrative and sketches available

Jan-Sept
Review and approval of narrative/sketches by lead scientists
Three core modules deployed
Additional modules under construction

Ongoing
Access tracking

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00423	**Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators**	**J. Bodkin, D. Esler/USGS-BRD, T. Dean/CRA, Inc.**	**DOI**

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Analysis of FY 99 data / report preparation

Jan-March
-Plan surveys and community involvement

April-June
-Prepare for field studies
-Submit annual report (April 15)

July-Sept
-Aerial survey of sea otters
-Sampling of intertidal green sea urchins
-Capture harlequins during wing molt for creation of captive flock
-Establish captive flock and initiate adjustment period

Proj.No.	Project Title	Proposer	Lead Agency
00424	**Restoration Reserve**	**All Trustee Council Agencies**	**ALL**

Project Tasks to be Completed this Quarter

Oct-Dec

Proj.No.	Project Title	Proposer	Lead Agency
00441	**Harbor Seal Recovery: Effects of Diet on Lipid Metabolism and Health**	**R. Davis/Texas A&M Univ.**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Trial 4 of staggered feeding protocol at ASLC (Sept-Dec); obtain and analyze blubber and muscle samples

Jan-March
DONE-Trial 5 of staggered feeding protocol (Jan-April); obtain and analyze blubber and muscle samples

April-June
-Trial 6 of staggered feeding protocol (May-Aug)
UNDERWAY-Analyze blubber and muscle samples from wild harbor seals in PWS in conjunction with biosampling program (May-Aug)
Submit annual report (4/15/00)

July-Sept
-Analyze data and begin preparation of final report and ms.

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00454	**Evidence and Consequences of Persistent Oil Contamination in Pink Salmon Natal Habitats**	S. Rice/NOAA	NOAA

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Collect SPMDs and eyed eggs from streams
DONE-Collect eyed eggs to determine onset of P4501A activity

Jan-Mar
-Begin fast-screen analysis of gravels and GC/MS analysis on SPMDs and eggs
-Collect alevins for P4501A induction

April-June
-Collect fy samples for P4501A and remaining SPMDs from streams
-Collect final P4501A samples
-Evaluate fry surviving exposures
-Begin analysis of fry for cytochrome P4501A activity, and growing out fry exposed in lab

July-Sept
'ag cultured fry

00455-BAA	**An Evaluation of the Data System for the EVOS Long-Term Monitoring Program**	C. Falkenberg/Ecologic Corp.	NOAA

Project Tasks to be Completed this Quarter

Dec. 31
UNDERWAY-Complete plan for background resesarch and a working list of possible advisory committee members

Jan 18-19
Attend EVOS Annual Workshop; meet with advisory committee

July 30
Complete final report of data system issues and background

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00459-CLO	Residual Oiling of Armored Beaches and Mussel Beds in the Gulf of Alaska	G. Irvine/USGS-BRD	DOI

Project Tasks to be Completed this Quarter

Oct-Dec
-

Jan-March
-Data and hydrocarbon analyses

April-June
-Submit final report (April 15)

July-Sept
-Submit manuscript to peer-reviewed journals: 1999 results on oil persistence and degradation at high-energy armored beaches.

Conference
Ecological Society of America, Salt Lake City, UT

00462	Effect of Disease on Pacific Herring Population Recovery in Prince William Sound	G. Marty/Univ. of California Davis	ADFG

Project Tasks to be Completed this Quarter

Oct-Dec
DONE; WERE ABLE TO SAMPLE ONLY 40 OF THE EXPECTED 100 FISH-Collect fall samples
DONE; WERE ABLE TO SAMPLE ONLY 40 OF THE EXPECTED 100 FISH-Complete scale analysis of fall samples

Jan-March
DONE; WERE ABLE TO SAMPLE ONLY 40 OF THE EXPECTED 100 FISH-Complete virology and bacteriology of fall samples

April-June
-Collect spring samples
-Submit annual report (4/15/00)

July-Sept
-Complete statistical analysis of fall samples
-Complete scale analysis of spring samples
-Complete virology and bacteriology of spring samples

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00466-CLO	Recovery Status of Barrow's Goldeneyes	D. Esler/USGS-BRD	DOI

Project Tasks to be Completed this Quarter

Oct-Dec
-

Jan-March
-

April-June
-Submit final report (April 15). Will consist of two ms:
1. Foraging ecology of Barrow's goldeneyes, including diet and body composition variation
2. Density of Barrow's goldeneyes, including habitat variables, mussel biomass, and oiling

July-Sept
-

476	Effects of Oiled Incubation Substrate on Pink Salmon Reproduction	R. Heintz/NOAA	NOAA

Project Tasks to be Completed this Quarter

NOTE: FISH ARE OUT TO SEA SO NO ACTION UNTIL SEPTEMBER 2000.

Oct-Dec

Jan-March
-
April-June
-Submit annual report (April 15)

Aug-Oct
-Pink salmon return and sampling begins

00478	Testing Satellite Tags as a Tool for Identifying Critical Habitat	J. Nielsen/USGS-BRD	DOI

Project Tasks to be Completed this Quarter

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00479	**Effects of Food Stress on Survival and Reproductive Performance of Seabirds**	**J. Piatt/USGS-BRD, A. Kitaysky/Univ. of Washington**	**DOI**

Project Tasks to be Completed this Quarter

Oct-Dec

Jan-March
-Prepare for field work, hire personnel
-Submit annual report (2/15/00)

April-June
-Blood sampling during pre-incubation stage
-Set study plots for experimental work

July-Sept
-Blood sampling during chick-rearing stage, colony work
-Implant birds with hormonal implants
-Monitor parental feeding rates and chick survival
-Begin chick rearing in captivity at University of Washington

Proj.No.	Project Title	Proposer	Lead Agency
00481	**Documentary Film on the Oil Spill Impacts on Subsistence Use of Intertidal Resources**	**G. Evanoff/Chenega Bay IRA Council, P. Panamarioff/ Ouzinkie Tribal Council**	**ADFG**

Project Tasks to be Completed this Quarter

Proj.No.	Project Title	Proposer	Lead Agency
00482-BAA	**Optimization of Rapid Diagnostic Test Kits for Paralytic Shellfish Poisoning and Amnesic Shellfish Poisoning**	**J. Jellett/Jellett Biotek Limited**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec
UNDERWAY-Test kits using 67 extracted samples collected from 1998 Kodiak field trials

Jan-Mar
-Optimize test kits to Kodiak samples
-Manufacture minimum of 200 rapid test prototypes for both PSP and ASP to test Kodiak samples

April-Sept
-Select sample sites and train shellfish sample collectors
-Test extracted and unextracted tissue (50 samples) from field sites
Comparison to control mouse bioassay, HPLC
Profiles developed on tests that do not agree
-Optimization of antibody mix

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00493	**Statistically-Based Sampling Strategies for Gulf of Alaska Ecosystem Trawl Survey Monitoring**	**P. Anderson/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Assemble current database
UNDERWAY-Statistical analysis of database

Jan-March
-Attend Annual EVOS Workshop

April-June
-

July-Sept
-Submit final report (9/30/00)

)501	**Protocols for Long-Term Monitoring of Seabird Ecology in the Gulf of Alaska**	**J. Piatt/USGS-BRD, G. Byrd, D. Roseneau/USFWS**	**DOI**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Initial planning meeting and review of data needs (Dec. 1)

Jan-Mar
-Power analyses, data and protocol evaluation
-Coordination meeting (Mar. 1)

April-June
-Complete draft monitoring protocols and distribute for review (April 30)

July-Sept
-Complete revised draft of monitoring protocol (Sept. 30)

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
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Proj.No.	Project Title	Proposer	Lead Agency
00509	**Long-Term Monitoring of Harbor Seal Populations: Development of an Experimental Design**	**R. Small, K. Frost/ADFG**	**ADFG**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE; CONTRACTORS AND ANHSC TECHNICAL REPRESENTATIVE TRAVELED FROM JUNEAU TO ANCHORAGE TO DISCUSS PROJECT OBJECTIVES AND METHODOLOGY-Select contractor and establish cooperative agreement
DONE-Acquire databases from ADFG and NMFS

Jan-Mar

April-June
-Complete evaluation of existing monitoring programs

July-Sept
-Complete development of new experimental design and integrate into monitoring programs
-Submit final report (Sept. 30)

510-BAA	**Recovery of Intertidal Communities and Recommendations for Future Monitoring**	**T. Dean/CRA, Inc.**	**NOAA**

Project Tasks to be Completed this Quarter

April 15
Complete drafts:
1. Dean, et al - Report or manuscript (if warranted by the analysis) describing the results of statistical comparisons of NOAA and CH1A data
2. McDonald, et al - Manuscript describing methods for assessing recovery and recommendations for future monitoring

Sept. 30
Report/manuscripts reviewed, revised, and submitted for final acceptance

00516-BAA	**Publication: Comparative Habitat Use by Kittlitz's and Marbled Murrelets**	**R. Day/ABR, Inc.**	**NOAA**

Project Tasks to be Completed this Quarter

April 15
Submit manuscript to Chief Scientist (differences in at-sea habitat use by marbled murrelets and Kittlitz's murrelets)

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00530	**Lessons Learned: Evaluating Scientific Sampling of Oil Spill Effects**	**M. See/ADEC**	**ADEC**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Develop scope of questions for white papers (Oct. 31)
DONE-Prepare contract documents

Jan-Mar
DELAYED TO FEB. 29-White papers due (Jan. 10)
DELAYED TO MAR. 30-Reviewer comments due (Feb. 11)
DELAYED TO APRIL 24-26-Facilitated workshop for Trustee agencies and scientists to discuss and reach consensus on white papers (Mar.)

April-June
-Draft workshop report submitted to workshop participants for review (May 15)
-Comments due on workshop report (June 16)

July-Sept
Final workshop report submitted to Chief Scientist and Trustee agencies for review and approval (July 17)

00541-BAA	**Publication: Prince William Sound Isotope Ecology**	**T. Kline/PWSSC**	**NOAA**

Project Tasks to be Completed this Quarter

June
Submit ms. to journal (Pacific salmon early marine life-history trophic shifts)

00552-BAA	**Exchange Between Prince William Sound and the Gulf of Alaska**	**S. Vaughn/PWSSC**	**NOAA**

Project Tasks to be Completed this Quarter

Oct-Dec
DONE; DEPLOYMENT DELAYED TO MID-DECEMBER DUE TO WEATHER AND LOGISTICS-Mooring deployment and PWS cruise (Oct.)

Jan-Mar
-Attend EVOS Annual Workshop

April-June
Mooring retrieval and PWS cruise (May)

July-Sept
-Mooring deployment and PWS cruise (Sept.)
-Complete data exchange with other SEA investigators

DRAFT

Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00567	**Monitoring Environmental Contaminants in the Northern Gulf of Alaska**	**M. See/ADEC**	**ADEC**

Project Tasks to be Completed this Quarter

Dec 20
DELAYED TO FEBRUARY/MARCH - Issue RFP

Jan 17
DELAYED TO FEBRUARY/MARCH - Select contractor

Jan-March
Literature compilation provided (March 6)

April-June
Workshop (May)
Workshop summary and draft recommendation to reviewers (June 12)

July-Sept
Comments due (July 31)
Submit final report to Chief Scientist (Aug. 31)

Proj.No.	Project Title	Proposer	Lead Agency
00598	Publication: Resolution of Mixtures Containing *Exxon Valdez* Oil and Regional Background Hydrocarbons in Subtidal Sediments	**J. Short/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

August
Submit ms. to journal (clarifying relative contributions of EVO and coal hydrocarbons to the hydrocarbons measured in PWS sediments after the spill)

Conference
American Chemical Society Meeting, San Francisco

Proj.No.	Project Title	Proposer	Lead Agency
00599	**Evaluation of Yakataga Oil Seeps as Regional Background Hydrocarbon Sources in Benthic Sediments of the Spill Area**	**J. Short/NOAA**	**NOAA**

Project Tasks to be Completed this Quarter

April-June
Collect sediment and water samples

July-Sept
Analyze samples for hydrocarbons

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Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
Quarter Ending December 31, 1999

Proj.No.	Project Title	Proposer	Lead Agency
00605	Information Transfer to Resource Managers, Stakeholders, and General Public	Restoration Office	ALL

Project Tasks to be Completed this Quarter

Oct-Dec (by Dec. 1)
UNDERWAY-Obtain 83 articles not currently at ARLIS
UNDERWAY-Convert abstracts of all articles into word processing format
UNDERWAY-Convert bibliographies of articles and final reports to ProCite; add key words and abstracts
DELAYED-Flag articles that will have data useful to resource managers

Jan-March
(by Jan. 15)
-Convert project database so it's searchable by key words
-Add FY 00 projects to database
-Update database with newly available final reports
-Install software for searching data and ordering reports from ARLIS
-Post bibliographies of articles and final reports onto web using new format
(by Mar. 15)
-Post ESI maps on web

ɔril-June
-Complete publication for resource managers
-Make copies of ESI maps
-Host open house for resource managers

00610	Kodiak Island Youth Area Watch	P. Brown-Schwalenberg/CRRC	ADFG

Project Tasks to be Completed this Quarter

Sept-Dec
-Confirm research and data collection activities to be conducted on ongoing basis:
UNDERWAY-Collect shellfish samples for field test
DELAYED; CAN'T SAMPLE UNTIL APRIL-Analyze algae
UNDERWAY-Conduct harbor seal biosampling
UNDERWAY-Local research projects
DONE-Site teacher, tribal, and researcher orientation
DONE-Students selected
DONE-Student orientation and training

Jan-March
Data/samples to PI (Mar. 1)
Site teacher follow-up training

ɪril-June
ɪta/samples to PI and reports complete (June 1)

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Exxon Valdez Oil Spill Project Status Summary
FY 00 Work Plan
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Proj.No.	Project Title	Proposer	Lead Agency
00630	Planning for Long-Term Research and Monitoring Program	Restoration Office	ALL

Project Tasks to be Completed this Quarter

Oct-Dec
DONE-Present draft of GEM to Trustee Council and PAG
DONE-Release draft of GEM to public
DONE-Produce materials needed for public presentations
DONE-Conduct first round of stakeholder and public meetings
UNDERWAY-Revise draft of GEM and circulate to core peer reviewers

Jan-Mar
-Address peer review comments and revise draft of GEM as needed
-Present revised GEM to NRC
-Meet with core reviewers at Annual EVOS Workshop to discuss transition projects to be invited in the FY 01 Invitation

April-Sept
-Continue interactions with NRC as needed
-Continue consultations wtih stakeholders and others as needed

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178

FAX MEMORANDUM

TO: Trustee Council

FROM: Molly McCammon
Executive Director

RE: Today's Meeting: Shark Project

DATE: February 29, 2000

The binder of materials you received for today's Trustee Council meeting (Tuesday, February 29) did not contain a recommendation on Project 00396 / Alaska Shark Assessment. The scientific review of that project has now been completed, and the Chief Scientist's recommendation and my recommendation on the project are attached. Also attached is a new summary spreadsheet which indicates total funding for the FY 00 work plan of $8,408,700.

EXECUTIVE DIRECTOR'S RECOMMENDATION: DEFERRED PROJECTS / FY 00 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Funded FY 00	Deferred to Feb.	**RECOM-MENDATION**	FY01 Recom.	FY02 Recom.	Total FY00-02
00396	Alaska Shark Assessment	L. Hulbert/NOAA	NOAA	New 1st yr. 2 yr. project	$0.0	$86.0	**$86.0**		$0.0	$86.0

Project Abstract

This project will assess the role of the predominant shark species as sentinels of change in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska. The revised proposal will investigate shark abundance indices, movements, demographics, and trophic interactions relative to ocean climate and trophic regimes. Existing fishery survey platforms for Pacific sleeper shark and spiny dogfish sampling will be used in conjunction with a directed salmon shark study to provide inexpensive sampling opportunities with broad spatial and temporal resolution. Acoustic telemetry and satellite tags will be employed to describe salmon shark and Pacific sleeper shark movements and migrations and critical feeding areas and depths. A long-term, multi-agency (Alaska Department of Fish and Game, National Marine Fisheries Service, and International Pacific Halibut Commission) tagging and sampling program will yield mark-recapture, demographic, and diet data.

Chief Scientist's Recommendation

This proposal addresses several shark species in the Gulf of Alaska. Relatively little is known about sharks, which appear to be of growing ecological importance in Prince William Sound and the Gulf of Alaska, and some work on these species is probably warranted. However, although the current proposal is greatly improved over previous versions, it is very broad and ambitious such that the work may not be able to be completed in the time available. Its proposed objectives cannot be achieved without a long-term commitment of significant resources. Recommend funding for FY 00 contingent on submittal and approval of a revised proposal that (a) reduces the scope to salmon sharks only, (b) focuses on Hypothesis #7, which is related to increased abundance of salmon sharks relative to a shift in their primary prey to the north with ocean warming, (c) adds an objective to estimate whether the salmon shark population in the Gulf of Alaska is sufficiently large to exert a significant influence on any prey fish population, and (d) is otherwise limited to Overall Objective #1 (collect and analyze salmon shark abundance data) and Short-Term Objective #1 (improve salmon shark bycatch records, sampling, and data sharing among agencies), along with the biotelemetry data objectives and directed salmon shark field sampling objectives contained in the current proposal. Objectives should be written to explicitly state what will be estimated or achieved rather than to describe the field method. Funding for FY 01 should be dependent on a review of the results of the FY 00 effort.

Executive Director's Recommendation

Fund FY 00 only contingent on submission and approval of a revised Detailed Project Description and budget as recommended by the Chief Scientist (reduce scope to salmon sharks only, with focus on abundance relative to ocean warming and added objective related to prey fish populations). Funding for continued work in FY 01 may be considered following review of results from the FY 00 effort. Sharks appear to be of growing ecological importance in Prince William Sound and the Gulf of Alaska. However, it is premature to consider any long-term study of sharks until a decision is made on which top-level predators will be a part of GEM (Gulf Ecosystem Monitoring), the Trustee Council's long-term research and monitoring program currently under development.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS: FY 00 WORK PLAN

Proj. No.	Project Title	Lead Agency	New or Cont'd	Approved in Aug.	Deferred to Feb.	**RECOM-MENDATION**	FY 01 Recom.	FY 02 Recom.	Total FY00-02	Exec. Director's Recommendation
00396	Shark Assessment	NOAA	New	$0.0	$86.0	**$86.0**		$0.0	$86.0	Fund contingent
00423	Population Change in Nearshore Vertebrate Predators	DOI	Cont'd	$185.4	$0.0	**$14.8**	$265.0	$265.0	$730.2	Fund
	Total:			$185.4	$86.0	**$100.8**	$265.0	$265.0	$816.2	

Already approved for FY 00: $8,307.9

TOTAL FY 00 WORK PLAN: $8,408.7
(target $8-9 million)

DRAFT

2/28/2000

EXECUTIV RECTOR'S RECOMMENDATION ON DEFERRED P ECTS: FY 00 WORK PLAN

Proj. No.	Project Title	Lead Agency	New or Cont'd	Approved in Aug.	Deferred to Feb.	**RECOM-MENDATION**	FY 01 Recom.	FY 02 Recom.	Total FY00-02	Exec. Director's Recommendation
00396	Shark Assessment	NOAA	New	$0.0	$86.0			$0.0	$0.0	Under review
00423	Population Change in Nearshore Vertebrate Predators	DOI	Cont'd	$185.4	$0.0	**$14.8**	$265.0	$265.0	$730.2	Fund
	Total:			$185.4	$86.0	**$14.8**	$265.0	$265.0	$730.2	

Already approved for FY 00: $8,307.9

TOTAL FY 00 WORK PLAN: $8,322.7
(target $8-9 million)

EXECUTIVE DIRECTOR'S RECOMMENDATION: DEFERRED PROJECTS / FY 00 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Funded FY 00	Deferred to Feb.	RECOM-MENDATION	FY01 Recom.	FY02 Recom.	Total FY00-02
00396	Alaska Shark Assessment	L. Hulbert/NOAA	NOAA	New 1st yr. 2 yr. project	$0.0	$86.0		$100.0	$0.0	$100.0

Project Abstract

This project will assess the role of the predominant shark species as sentinels of change in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska. The revised proposal will investigate shark abundance indices, movements, demographics, and trophic interactions relative to ocean climate and trophic regimes. Existing fishery survey platforms for Pacific sleeper shark and spiny dogfish sampling will be used in conjunction with a directed salmon shark study to provide inexpensive sampling opportunities with broad spatial and temporal resolution. Acoustic telemetry and satellite tags will be employed to describe salmon shark and Pacific sleeper shark movements and migrations and critical feeding areas and depths. A long-term, multi-agency (Alaska Department of Fish and Game, National Marine Fisheries Service, and International Pacific Halibut Commission) tagging and sampling program will yield mark-recapture, demographic, and diet data.

Chief Scientist's Recommendation

REVISED PROPOSAL UNDER REVIEW.

Executive Director's Recommendation

REVISED PROPOSAL UNDER REVIEW.

EXECUTI\ IRECTOR'S RECOMMENDATION: DEFERRED PR(:TS / FY 00 WORK PLAN

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Funded FY 00	Deferred to Feb.	**RECOM-MENDATION**	FY01 Recom.	FY02 Recom.	Total FY00-02
00423	Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators	J. Bodkin, D. Esler/USGS-BRD, T. Dean/CRA, Inc.	DOI	Cont'd 2nd yr. 4 yr. project	$185.4	$0.0	**$14.8**	$265.0	$265.0	$730.2

Project Abstract

Sea otters and harlequin ducks have not fully recovered from the oil spill. This project will explore links between oil exposure and the lack of population recovery, with the intent of understanding constraints to recovery of these species and the nearshore environment. Sea otter work will include aerial surveys of distribution and abundance, estimation of abundance and size of green sea urchins, and sea otter carcass surveys. Harlequin duck work will include field and captive bird components. Harlequin field studies will examine the relationship between survival and CYP1A; captive experiments will examine the relationships between oil exposure and CYP1A induction, and metabolic and behavioral consequences of exposure.

Chief Scientist's Recommendation

This is the second year of a four-year project to investigate evidence of ongoing injury to harlequin ducks and sea otters as follow-up on important findings of the Nearshore Vertebrate Predator project (/025). Results of recently completed analyses indicate that the spill has continued to have an impact on sea otter populations in Prince William Sound. The supplementary funding request ($14.8) is to collect sea otter carcasses once again and to determine their age at death. Modeling using carcass data, i.e., time and age of death, needs to be continued in order to track recovery of sea otter populations and the hopeful return of adult survival to pre-spill conditions. The Department of the Interior will provide matching funds for the carcass component of the project. Fund.

Executive Director's Recommendation

Fund revised proposal, including funds requested in February 2000 ($14.8) to continue sea otter carcass surveys. Recent modeling efforts based on age-at-death data from sea otter carcasses suggest that these surveys may be one of the most efficient tools for monitoring recovery of sea otters. The revise proposal eliminates two new objectives related to sea otter field studies (CYP1A and mark-resighting). This project is an important extension of the Nearshore Vertebrate Predator (Project /025) work on two still-injured species, sea otters and harlequin ducks. [NOTE: Funding includes $36.8 for Alaska SeaLife Center bench fees.]

Revised 2-22-00

Alaska Shark Assessment Project

Project Number:	00396
Restoration Category:	Research
Proposer:	Leland B. Hulbert NMFS, Auke Bay Laboratory
Lead Trustee Agency:	NOAA
Cooperating Agencies:	Alaska Department of Fish and Game, International Pacific Halibut Commission, Stanford University, University of Washington
Alaska Sea Life Center:	no
Duration:	Year 1 of 2 year project
Cost FY 00:	$86.2K
Geographic Area:	Prince William Sound
Injured Resource/Service:	Pink salmon, Sockeye Salmon, Pacific herring, Rockfish, Harbor seals

ABSTRACT

This project investigates shark abundance indices, movements, demographics, and trophic interactions in the eastern Gulf of Alaska (GOA) and Prince William Sound (PWS). Utilizing existing fishery survey platforms for Pacific sleeper shark and spiny dogfish sampling, in addition to a directed salmon shark study, will provide inexpensive and high-quality sampling opportunities with broad spatial and temporal resolution. State-of-the-art acoustic telemetry tags and satellite tags will be employed to describe salmon shark and Pacific sleeper shark movements and migrations, and critical feeding areas and depths. A long-term multi-agency (Alaska Department of Fish and Game (ADF&G), National Marine Fisheries Service (NMFS), International Pacific Halibut Commission (IPHC)) shark tagging and sampling program will yield mark-recapture, demographic, and diet data. This project encompasses a unique low-cost approach to understanding trends in abundance, demographics and trophic dynamics of these apex predators relative to ocean climate and trophic regimes. This research is needed to assess the role of the predominant shark species as sentinels of change in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska.

INTRODUCTION

Salmon sharks, *Lamna ditropis*, Pacific sleeper sharks, *Somniosus pacificus*, and spiny dogfish sharks, *Squalus acanthias*, are the predominant shark species in coastal GOA, yet very little is known of their trends in abundance, demographics, ecology, or seasonal movements. Throughout the 1990's shark sightings and bycatch in Prince William Sound and the eastern Gulf of Alaska increased dramatically. (See Appendix Figures 1 - 5).

In regions of high abundance, sharks have the potential to affect the recovery of oil spill damaged species including wild salmon, herring, and rockfish. This proposed study will employ a conventional tagging and sampling effort and the latest advances in marine biotelemetry technology to collect data on the movements and migrations, seasonal residency, demographics and ecology of salmon sharks, Pacific sleeper sharks and spiny dogfish in PWS and the eastern GOA. Lethal samples such as urogenital tracts, stomachs, and vertebrae will be provided primarily through cooperative arrangements with sport fishing charters, standardized surveys, and commercial fishermen. Non-lethal tissue samples for fatty acids and genetic analyses will be collected and archived as part of the standard survey sampling protocol. Samples for stable isotope tracer analyses will also be collected and sent to Dr. Tom Kline at the Prince William Sound Science Center in Cordova.

This project incorporates improved shark bycatch records and data sharing from existing standardized surveys. Cooperation from the agencies and project leaders directing these surveys which will generate a large Alaska Shark Assessment Project Database from which to draw upon for analyses. Much of the shark research around the world are highly dependent upon fishery catch statistics. Inherent in fishery data sources are high degrees of variability that confound attempts to consistently assess trends in shark distribution and abundance. Cooperative commitments from ADF&G, NMFS, and IPHC surveys have been established. Cooperating longline and trawl surveys have established standardized sampling designs which will yield low-cost shark bycatch data that will have unprecedented quality and spatial and temporal resolution within the study area. Most of the cost for participating aboard the various survey platforms will simply involve travel to and from the survey vessels, and sample shipping.

To understand the life history, habitat utilization, and trophic ecology of sharks in PWS, spatial and temporal movement patterns must be identified. Obtaining behavior information of fish in the open sea is a difficult task. Conventional tag-and-recapture programs studying sharks are dependent on fisheries for tag recoveries, and as indicators of movement and behavior have limited resolution. Due to the low exploitation rate of salmon sharks in commercial fishing gear, they are inaccessible to most conventional methods of study. Recent advances in satellite tags, data archival tags, and acoustic telemetry tags now provide marine researchers with powerful new tools to study these top predators.

Successful satellite platform transmitter terminal (PTT) applications have been demonstrated recently for monitoring the movements, thermal physiology, feeding habits, and diving behavior of large pelagic vertebrates including pinnipeds (Lowry et al. 1997, Boyd et al. 1998), cetaceans (Mate et al. 1998), tunas (Block et al. 1998), penguins (Culik and Jorquera 1997), and sea turtles (Morreale 1999). The most advanced versions of PTT tags, the pop-up archival transmitting

(PAT) tag, and the smart position-only transmitting (SPOT) tag will be commercially available from Wildlife Computers for the first time in 2000.

PAT tags measure and record temperature, depth, and light intensity for up to one year. Data are collected each minute and summarized into 1 to 24 hour blocks of time. Depth and temperature are measured to within 0.5m and 0.05°C resolution. Time blocks, depth and temperature bin ranges are user-defined. The tag releases (pops-up) from the animal on a user-defined date and time, and transmits archived data and position. Daily latitude and longitude are calculated from algorithms that estimate time of sunrise and sunset. Because there are a few problems with the accuracy of position calculated from ambient light records, Wildlife Computers is currently conducting extensive trials to validate and refine their algorithms. This application will be best suited to highly migratory animals (salmon sharks) because of the low resolution of daily geoposition calculations. Location of the tag after pop-up is calculated from a Doppler shift in the transmitted signal as the satellite approaches and then moves away from the PTT. Long-term depth and temperature data from PAT-tagged salmon sharks will be supplemented with shorter duration high resolution acoustic telemetry and archival tags.

A pilot study investigating the practical application of the latest Argos PTT technology for salmon
shark research has been a resounding success. PAT tags were deployed opportunistically on salmon sharks in PWS by APEX 163A investigators on July 26, 1999 with the collaboration of Dr. Barbara A. Block, a Stanford University physiologist. Sixty days later, the first tag released near Seal Island in PWS and began transmitting depth and temperature data archived during it's time attached to the shark. The second PAT tag popped up after ninety days near Shuyak Island on the north end of Kodiak Island. Figure 6 in the appendix are data of the salmon sharks depth preference recovered by the tags. The data revealed inconclusive evidence of diel patterns of depth preference. Time at depth variation in the PAT tag data can be related not only to season, and time of day, but also to physical and environmental conditions such as thermocline structure, tides, wind, and sea-state on a given day.

Utilization of the latest advances in remote sensing technology will yield previously inaccessible data that are necessary to study salmon shark and sleeper shark movements and ecology. Combined with conventional tagging efforts and demographic and diet data from various survey platforms (ADF&G, IPHC, NMFS) and sport fisheries, the study will yield high quality information on abundance trends, movements, and predatory interactions of sharks in PWS and the GOA.

NEED FOR THE PROJECT

A. Statement of the Problem

We are seeing salmon sharks, Pacific sleeper sharks, and spiny dogfish sharks in numbers never described before. Sharks have been poorly documented in most fisheries survey and commercial bycatch data. Reliable information on these species' abundance, residency patterns, seasonal movements, and trophic interactions in PWS and the GOA does not exist. Pacific sleeper sharks and spiny dogfish sharks are commonly taken as bycatch by trawl and longline surveys, but data collection has been poor, inconsistent, and have not been compiled or analyzed. An opportunity exists to collect and compile standardized shark bycatch data into an accessible Alaska Shark Assessment Project Database that will yield low-cost, high quality data with broad temporal and spatial resolution for analysis.

Unlike Pacific sleeper sharks and spiny dogfish sharks, salmon sharks are seldom taken in commercial and standardized survey fishing gear. Therefore, indices of salmon shark abundance are not yet available. The project will construct a standardized index of surface-to-subsurface distribution patterns based on directed studies from satellite and acoustic telemetry tags and archival data loggers, side scanning sonar, Furuno downsounders, and remote operated vehicle video. The index will be applied to aerial survey counts collected by ADF&G (Dan Sharp), USGS (Jim Bodkin), and UAF (Evelyn Brown) in PWS. Indices of salmon shark abundance from aerial counts will be based on methods in Bodkin and Udevitz 1999.

Sharks inhabiting Alaskan waters have low fecundity, long gestation periods, long life, and slow maturation. Because of this, evidence of changes in their abundance may be important indicators of long-term changes in trophic community structure. Once sharks reach a dominance level in the community they are likely to continue that dominance for a long time. In regions of high abundance, sharks have the potential to affect the recovery of oil spill injured species, including Pacific herring, Pacific salmon, rockfish, and harbor seals.

B. Rationale

The short-term objectives of the Alaska Shark Assessment Project are: (1) foster and establish improved shark bycatch records, sampling, and data sharing among agencies that conduct standardized surveys in PWS and the GOA; (2) establish an accessible Alaska Shark Assessment Program Database; and (3) report on shark abundance and distribution indices in relation to GOA trophic community composition and ocean climate indices. The project will draw upon ongoing small mesh trawl research by NMFS biologists Paul Anderson and Jim Blackburn for indices of trophic community composition change. Gulf of Alaska ocean climate indices from Mantua et al 1997, Baily et al. 1995, D.M. Ware 1995, and others will be utilized in the analyses.

This project encompasses a unique approach to understanding trends in abundance, demographics and trophic dynamics of these apex predators relative to ocean climate and trophic regimes. This research is needed to address the role of the predominant shark species in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska.

The ecological role of sharks in PWS and their affects on the recovery of spill injured resources in the region will vary with temporal and spatial patterns of movement. These movement patterns are currently unknown. This research will provide a valuable contribution to the understanding of shark ecology in the GOA and PWS and will document and help quantify predator/prey interactions in the region.

Arrangements have been made to participate in the ADF&G directed sablefish survey, and the IPHC directed halibut survey in 2000 (Bill Bechtol and Dan Randolf 2000 pers. comm.). Both of these surveys catch many sharks, primarily spiny dogfish and sleeper sharks, and will contribute to the sampling effort. ADF&G biologist Bill Bechtol has already started a shark tagging program in his survey, which the PI will expand to other agency surveys. These will include a number of NMFS directed longline and trawl surveys and the Halibut Commission survey. Jane DiCosimo, with the North Pacific Fisheries Management Council, has made it a priority to separate shark species from the "other" category in the Racebase and Norpac databases. This will yield still more quality shark bycatch data in the future. The cooperative contribution of tagging and sampling shark bycatch from surveys and fisheries to the Alaska Shark Assessment Program database will allow us to establish and draw from shark data in the GOA with broad spatial and temporal resolution. University of Washington stock assessment specialist Dr. Vincent Gallucci has volunteered to provide technical consultation on data analyses (Vincent Gallucci 2000 pers. comm.). This cooperative effort will enable high quality, low cost analyses of shark abundance indices, demographics, and trophic interactions in PWS and the GOA.

Salmon sharks and sleeper sharks don't readily lend themselves to observation, they are rarely tagged, and consequently, very little is known about their movements and ecology in Alaska waters. The new technology of satellite telemetry makes it possible for researchers to study effectively for the first time the migratory habits and seasonal residency of large predatory sharks in the GOA and PWS ecosystems. Data collected from conventional tagging efforts and aerial abundance surveys, will be supplemented with data from satellite tags, archival data storage tags, and sonic tags, deployed on salmon sharks and sleeper sharks. These advanced data-gathering technologies provide state-of-the-art methods to acquire otherwise difficult to collect or unattainable data on the movements and ecology of these apex fish predators in the PWS and GOA ecosystems. Stanford University professor Dr. Barbara Block, one of the foremost authorities on large pelagic fish physiology and satellite tags, has expressed keen interest in the project and has volunteered technical and collaborative support (Dr. Barbara Block 2000 pers. comm.). Dr. Block was instrumental last year in a pilot study to describe the movements of salmon sharks and assisted in collection of data in Prince William Sound. We are counting on her participation during the summer of 2000.

Information on abundance indices, seasonal residency patterns, and food habits are needed to describe shark predator-prey interactions. This information will be of great value in evaluating the ecological role of sharks in the PWS and GOA ecosystems. One of the more cost-effective methods of assessing complex interactions of a food web is diet analysis from stomach contents. Cooperation has been established with commercial and sport fishermen and various agencies to acquire shark stomachs and other lethal samples from sharks in PWS and the GOA.

This project encompasses a unique approach to understanding trends in abundance, demographics and trophic dynamics of these apex predators relative to ocean climate and trophic

regimes. This research is needed to address the role of the predominant shark species as indicators of change in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska.

C. Location

Prince William Sound and Gulf of Alaska

COMMUNITY INVOLVEMENT AND TRADITIONAL KNOWLEDGE

A traditional and local knowledge component will be incorporated in this study. The villages of Cordova, Chenega, and Tatitlik will be asked to contribute their knowledge of shark temporal abundance and distribution. Community members may also be hired to recover PAT tags when they "pop-up" in PWS.

PROJECT DESIGN

A. Objectives and Hypotheses

The overall objective of the project is to establish a shark database and sample archive from cooperating multi-agency fisheries surveys and quantify shark abundance trends and predator-prey interactions in relation to dynamic trophic and climate regimes in PWS and the GOA. All permits necessary for this work are in place. The objectives are:

Overall Objectives

1. Collect and analyze shark abundance indices relative to large pelagic predator and prey abundance indices.

2. Collect and analyze shark abundance indices relative to ocean climate indices.

3. Collect and analyze shark distribution data relative to climate and trophic regime shifts.

Short Term Objectives

1. Foster and establish improved shark bycatch records, sampling, and data sharing among agencies that conduct standardized surveys in PWS and the GOA

2. Establish an accessible Alaska Shark Assessment Program Database

3. Report on shark abundance and distribution indices in relation to GOA trophic community composition and ocean climate indices.

Primary Hypotheses

H1: The Shark spp. abundance indices have increased in the northeast Pacific during the last X years.

H2: Shark spp. abundance indices do not change with changes in ocean climate indices.

H3: Shark spp. abundance indices do not change with changes in trophic community composition.

H4: Shark spp. distribution changes with changes in ocean temperatures.

H5: Shark spp. distribution does not change with changes in trophic community composition.

H6: Shark abundance indices indicate that shark numbers continue to increase in the northeast Pacific.

H7: Salmon shark abundances have increased in the GOA in response to a shift in the GOA of their primary prey (salmon) to the north as a result of global warming.

Secondary Objectives

*Inject sharks with oxytetracycline for age validation studies

*Collect vertebrae

*Assist in establishing management strategies by providing data for modeling an age-growth relationship and demographics of salmon sharks (VIMS/ Ken Goldman)

* Not primary objectives of this study, but will be completed as time allows in the interests of cooperative science. No further funds are associated with these components of the study. The necessary materials will be provided to us and we will simply tag and inject sharks or collect samples.

Biotelemetry Data Objectives:

1. PAT tags: large-scale geographic movement data, time spent at depth, ratios of surface-to-subsurface abundance, seasonal PWS residency patterns

2. SPOT tags: high resolution salmon shark movement data and seasonal PWS residency patterns

3. Acoustic telemetry tags: salmon shark body temperature, feeding periodicity, foraging depths.

4. Archival tags: salmon shark body temperature, feeding periodicity, foraging depths

Directed Salmon Shark Field Sampling Objectives

1. Collect and archive non-lethal tissue samples (fin clips, skin, muscle) for fatty acid composition analyses and population genetics

2. Collect non-lethal tissue samples for stable isotope tracers, send to Dr. Kline for analysis.

3. Collect length, weight, and sex data

4. Lavage living sharks to collect non-lethal stomach contents samples

B. Methods

Sleeper shark and spiny dogfish bycatch in standardized surveys:
Pacific sleeper shark and spiny dogfish abundance indices data will be contributed through collaborative relationships with ADF&G biologist Bill Bechtol and IPHC data management specialist Dan Randolf. Shark bycatch data will be collected during GOA and PWS longline surveys (Bill Bechtol and Dan Randolf, 2000 pers. comm.). Other data will be contributed from various other cooperating NMFS surveys. The project PI will participate in the ADF&G sablefish longline survey and the IPHC halibut longline survey for Pacific sleeper shark and spiny dogfish sampling August and September 2000. ADF&G and IPHC will provide the vessel platform and specific sampling protocol training pertaining to their annual longline surveys.

Sampling methodology for cooperating standardized longline and trawl surveys (ADF&G, NMFS, IPHC) follow established protocols. We will collect sample sizes that will be statistically sufficient to address abundance indices and demographic questions. Shark sampling protocol will necessarily be flexible and tailored to specific surveys. The Alaska Shark Assessment Project will work with survey PIs and recommend or carry out specific shark sub-sampling routines for each contributing survey. A recommended shark sampling goal for FY2000 cooperating surveys will be as follows:

1. **Longline surveys**
   a. Record total number of each species per skate
   b. Measure and sex all sharks or a maximum of 5 sharks of each species per skate
   c. Double tag and release as many sharks as possible as time allows
2. **Trawl surveys**
   a. Record total number of each species per tow
   b. Measure and sex all sharks or a maximum of 10 sharks of each species per tow
   c. Double tag and release as many sharks as possible as time allows

Directed salmon shark field sampling:
We will use purse seine gear for catching salmon sharks. The sampling protocol for salmon sharks will be largely opportunistic and will target individual sharks seen at the surface.

1. Sharks will be sexed and measured for length, and weight (or estimated from length/girth measurements). After measurement, if a shark is to be released, tissue samples will be collected for fatty acids and stable isotope tracers analyses, it will be double tagged with a numbered ADF&G spaghetti tag (Floy), and injected with oxytetracycline for age validation studies (Ken Goldman/VIMS). If a shark is killed, vertebrae and stomach content samples will be collected and frozen for subsequent laboratory analysis. Maturity state will be

recorded and urogenital tract collected and preserved in 10% formalin solution or frozen: presence or absence of eggs or embryos in females, and male clasper length will be recorded. A maximum of five salmon sharks will be collected. Permits allowing this are in place.

2. Other noteworthy information will be recorded when possible, including: date and location of capture, water depth and surface temperature, feeding behavior, localized seasonal aggregations, predator-prey interactions, proximity to known prey concentrations (i.e. spawning events etc.).

3. Vertebrae samples will be frozen and sent to Ken Goldman at VIMS for age determination. Mr. Goldman will be producing an age-growth relationship and modeling the demographics of salmon sharks in Gulf of Alaska waters.

Percentage of time spent at depth from PAT tags deployed on salmon sharks will be used to construct indices of surface-to-subsurface abundance. Down sounder, scanning sonar, and ROV underwater video observations of the vertical distribution and abundance of salmon will be collected in the field to support PAT tag data. Aerial abundance survey and statistical methods will follow the methodology for sea otter abundance estimates detailed in Bodkin and Udevitz (1999). Aerial salmon shark counts used in the analysis will be contributed by cooperating aerial survey projects. Assumptions regarding detection probabilities will be supported by real-time coordination of aerial and vessel-based observations when possible. Aerial salmon shark data collected in 1999 is being analyzed (James Bodkin and Evelyn Brown 1999 pers. comm.). Analysis of standardized aerial survey counts of salmon sharks will be used to construct annual indices of salmon shark abundance in PWS.

Depth sounder and scanning sonar equipment and data interpretation will be provided by the contracted vessel captain. ABL research biologist Scott Johnson has volunteered to provide and operate a Deep Ocean Engineering ROV for the project.

General shark sampling methods

a. Mean body weight

Sharks will be weighed in the field when possible to support mean body weight estimates and develop length-to-weight relationships of sharks. The scales used to weigh the sharks will be provided by NMFS Auke Bay Laboratory.

b. Diet composition

This project will obtain stomach samples in four ways:

1. Sport fishing charter operators will provide salmon shark samples from PWS. Fishermen who have expressed an interest in participating are: Bob Candopoulos (Saltwater Safari Co., Seward), Bob Day (Sound Adventures, Seward), and Luke Borer (Native Son Sportfishing Charters, Cordova). These fishermen will collect samples in July and August, the period of highest salmon shark catches in the sound.

2. ADF&G port sampling will provide shark stomach samples.

3. Sleeper shark and spiny dogfish stomachs will be collected by the PI while participating aboard ADF&G and IPHC longline survey vessels. (Invitation from ADF&G chief scientist, Bill Bechtol, and IPHC data management specialist Dan Randolf)

4. Shark bycatch from the PWS commercial fishing fleet will be voluntarily contributed: herring purse seiners (April, November), salmon purse seiners (July/Aug), sablefish and halibut longliners (Feb/March), gillnetters (June/ July).

The stomachs will be frozen and shipped to the National Marine Fisheries Service, Auke Bay Laboratory (ABL), for identification. Diet composition analysis will follow methods detailed in Cortes 1999. Standard methods for stomach samples will include identifying and enumerating all contents to the highest taxonomic resolution possible and estimating the volumetric and weight component of each prey item or prey group. Species composition of shark diet will be determined by %weight, %volume, and % frequency of occurrence. Only sleeper sharks that are "tail wrapped" in longline gear and brought to the surface tail-first will be sampled for diet composition. This will reduce biased samples due to regurgitation. Because the salmon shark stomachs will be acquired opportunistically from various sources, control of regurgitation bias will not be possible.

c. Annual residency and movements

Annual residency and movements will be described from mark-recapture data, PTT movement data, and stable isotope tracers analyses.

C. Cooperating Agencies, Contracts, and Other Agency Assistance

The major activities for this project include use of NOAA/ NMFS/ ABL biological lab space for sample analysis and storage, access to agency library materials and literature, and computers for database management and statistical analyses.

Prince William Sound Science Center, via Tom Kline, will perform shark stable isotope analyses.

Alaska Department of Fish and Game will provide platform time for sleeper shark and spiny dogfish sampling opportunities during annual Fall sablefish longline surveys in on the outer Kenai Peninsula and PWS.

The International Pacific Halibut Commission will provide platform time for sleeper shark and spiny dogfish sampling opportunities during annual Fall halibut longline surveys in on the outer Kenai Peninsula and PWS.

Alaska Department of Fish and Game will provide shark tags, oxytetracycline, tagging equipment, and shark stomach samples collected in their field and port sampling programs.

Stanford University, via Barbara Block, will provide technical consultation, personal transportation, and acoustic telemetry tags and receivers.

SCHEDULE

A. Measurable Project Tasks for FY 00 (October 1, 1999-September 30, 2001)

February-March 2000:	Submit Argos System Use Agreement for Alaska shark Argos program; Order PTT's from Wildlife Computers
July 2000:	Conduct field data collections
August- September 2000:	Acquire samples collected by ADF&G, and others, sample and tag shark bycatch in IPHC halibut survey
September 2000:	Sample and tag shark bycatch in ADF&G halibut survey
October 2000-November 2000:	Organize and analyze data from FY00 field season
December 2000- January 2001:	Prepare for and attend annual restoration workshop
February- March 2001:	Prepare annual reports
April 2001-September 2001:	Collect and analyze samples from both directed and opportunistic sampling
	Submit final reports and peer reviewed publications

B. Project Milestones and Endpoints

FY 00:
Milestone: Submit Argos System Use Agreement for Alaska shark Argos program
Endpoint: Receive Argos PTT ID numbers

Milestone: Order PTT's from Wildlife Computers
Endpoint: Receive PTT's from Wildlife Computers

Milestone: Order sonic tags for FY00 field season
Endpoint: Receive sonic tags for FY00 field season

Milestone: Conduct directed salmon shark field sampling, tag deployments
Endpoint: Compile and analyze data and samples

Milestone: Conduct directed salmon shark field sampling, tag deployments
Endpoint: Compile and analyze data and samples

Milestone: IPHC halibut longline survey sampling opportunity
Endpoint: Compile and analyze data and samples

Milestone: ADF&G sablefish longline survey sampling opportunity
Endpoint: Compile and analyze data and samples

FY 01:
Milestone: Complete draft manuscripts
Endpoint: Complete revisions to manuscripts

Milestone: Cooperative data sharing.
Endpoint: Complete final peer reviewed synthesis report with quantitative aspects.
The report will summarize results in terms of abundance indices relative to ocean climate and trophic community structure, spatial and temporal movements, and diet composition of salmon sharks spiny dogfish sharks, and Pacific sleeper sharks in PWS and the GOA.

C. Completion Date

September 30, 2001

D. Budget Summary

Budget Category:	FY 00
Personnel	$26.4
Travel	$ 6.2
Contractual	$24.3
Commodities	$23.6
Equipment	$ 0.0
Subtotal	$80.5
General Administration	$5.7
Project Total	$86.2

PUBLICATIONS AND REPORTS

At least two written products will be produced from this study:

1. An EVOS annual report will describe the results and accomplishments of the research to date.

2. An EVOS final report describing shark abundance indices in PWS and the GOA.

PROFESSIONAL CONFERENCES

The PI will attend the EVOS Annual Restoration Workshop in the winter of 2001.

NORMAL AGENCY MANAGEMENT

NOAA/NMFS has statutory stewardship for most living marine resources; however, if the oil spill had not occurred, NOAA would not be conducting this project. NOAA/NMFS proposes to make a significant contribution (as stated in the proposed budget) to the operation of this project, making it truly cooperative.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

The information gathered in this study may be useful to understanding the lack of recovery of some non-recovering species (harbor seals, Pacific herring).

PROPOSED PRINCIPAL INVESTIGATOR

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Lee has been employed as a Fisheries Research Biologist at the Auke Bay Laboratory, NMFS for 3 years and has two years prior work experience in fisheries biology at ABL. He is currently a CO-PI on the EVOS Alaska Predator Ecosystem Experiment (APEX) Forage Fish Assessment Project (163A). He holds a B.S. degree (1992) in Fisheries Biology from Humboldt State University. He has extensive commercial fishing experience in Prince William Sound and has also fished commercially in Bristol Bay, Togiak, Cook Inlet, the Gulf of Alaska, and S.E. Alaska. He has worked on the APEX Forage Fish Component (163C) for over 3 years. He recently presented a paper at the International Pelagic Shark Workshop in Monterey California titled: Shark Abundance following Regime Shifts in the Gulf of Alaska as an Indicator of Trophic Community Restructuring.

OTHER PERSONNEL

Bill Bechtol, ADF&G Homer, AK
Fisheries biologist

Barbara Block, Professor, Stanford University, CA
Expert in evolutionary, cellular and molecular physiology, and satellite telemetry of large fishes (marlin, tuna, sharks)

Scott Johnson, NMFS, Auke Bay Laboratory
Fisheries research biologist

Thomas Kline, Jr., Prince William Sound Science Center, Cordova AK
Oceanographer/Fisheries ecologist

Scott Meyer, ADF&G, Homer AK
Sport fisheries biologist, manages port sampling program

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Ware, D.M. 1995. A Century and a Half of Change in the Climate of the NE Pacific. Fish. Oceanogr. 4:4, 267-277, 1995

PERSONAL COMMUNICATIONS

Bechtol, Bill: ADF&G, Homer, (907) 235-1741, BillB@fishgame.state.ak.us

Bodkin, James: USGS, Alaska Biological Science Center, Anchorage

Brown, Evelyn: UAF, Fairbanks, (907) 474-(5801) or 7938, ebrown@ims.uaf.edu

Goldman, Ken: VIMS, (804) 684-7556, keng@vims.edu

Heintz, Ron: NMFS Auke Bay Laboratory, Juneau, (907) 789-6058, Ron.Heintz@noaa.gov

Hill, Roger: Wildlife Computers, Redmond, WA, (425) 881-3048, tags@wildlifecomputers.com

Kline, Thomas: PWSSC, Cordova, (907) 424-5800

Randolf, Dan: IPHC, Seattle Washington, 206-634-1838 x-213 Data management

Wing, Bruce: NMFS Auke Bay Laboratory, Juneau, (907) 789-6034, BruceWing@noaa.gov

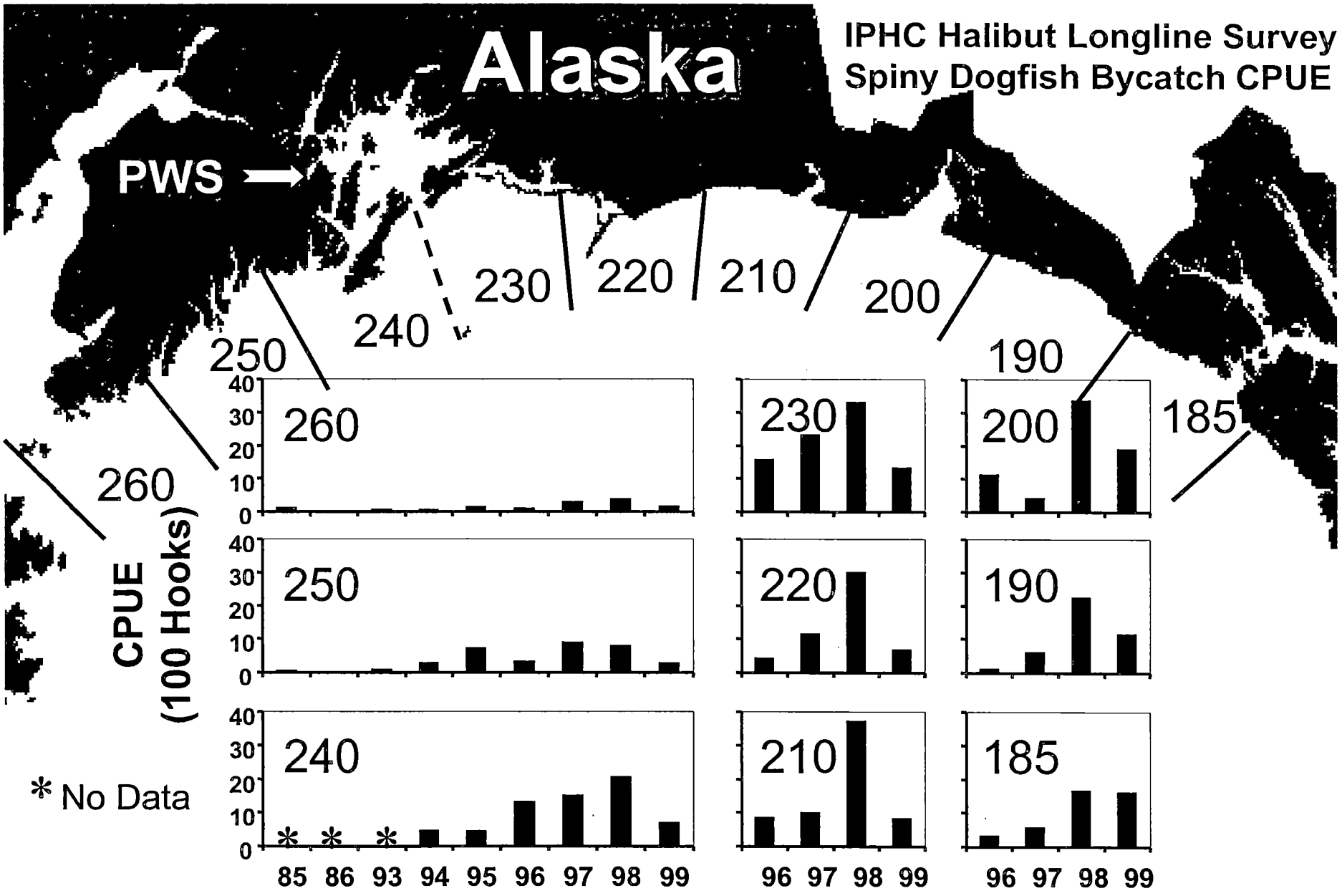

Figure 1. International Pacific Halibut Commission spiny dogfish bycatch per 100 hooks averaged within IPHC statistical areas. Raw data courtesy of IPHC data management specialist, Dan Randolf, 2000 pers. Comm.

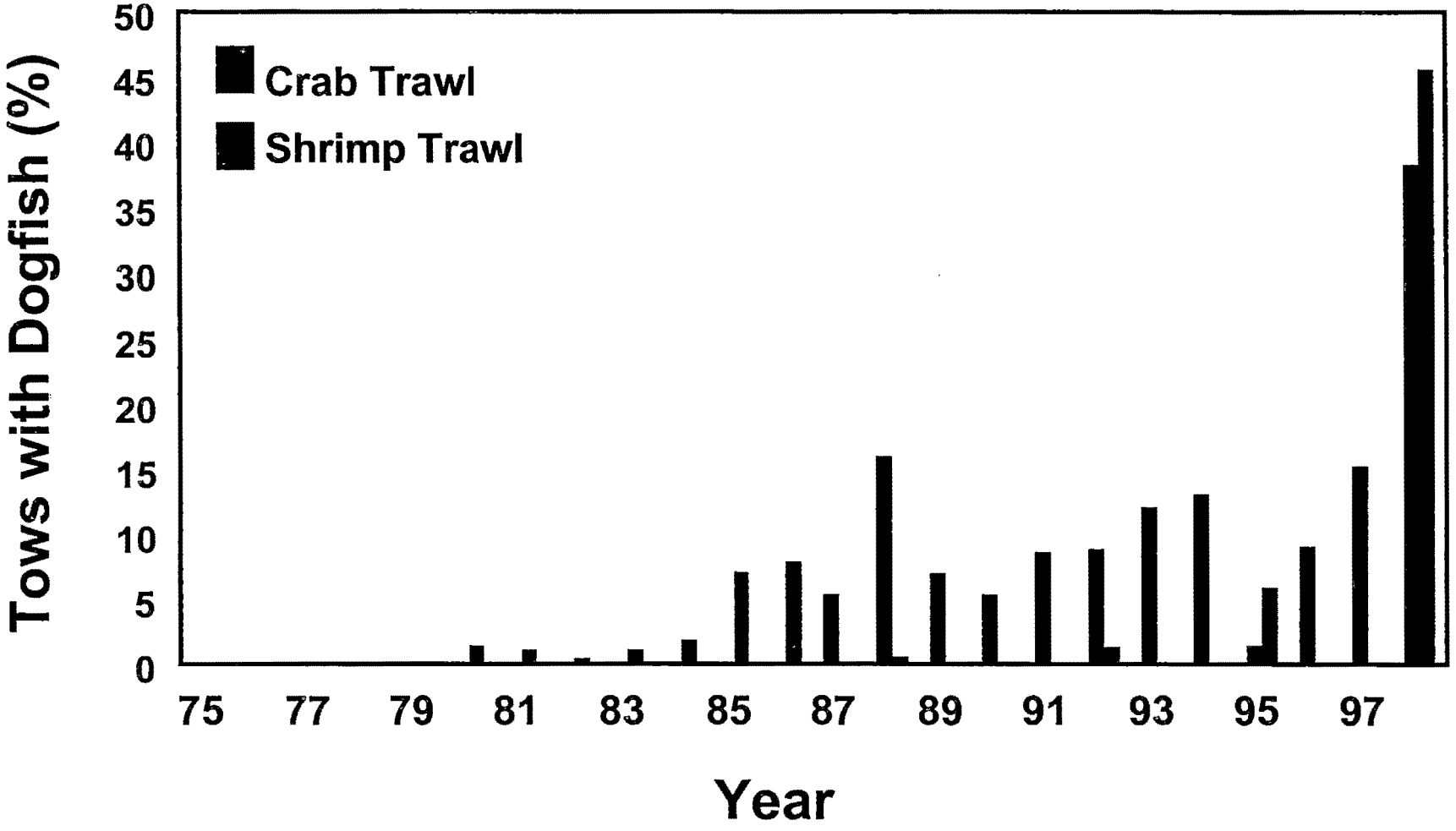

Figure 2. Percent trawl tows with dogfish in the Kodiak, Alaska region by year. Between 1975 and 1979, one shrimp trawl in 1565 tows contained dogfish. Raw data courtesy of Jim Blackburn, NMFS Kodiak.

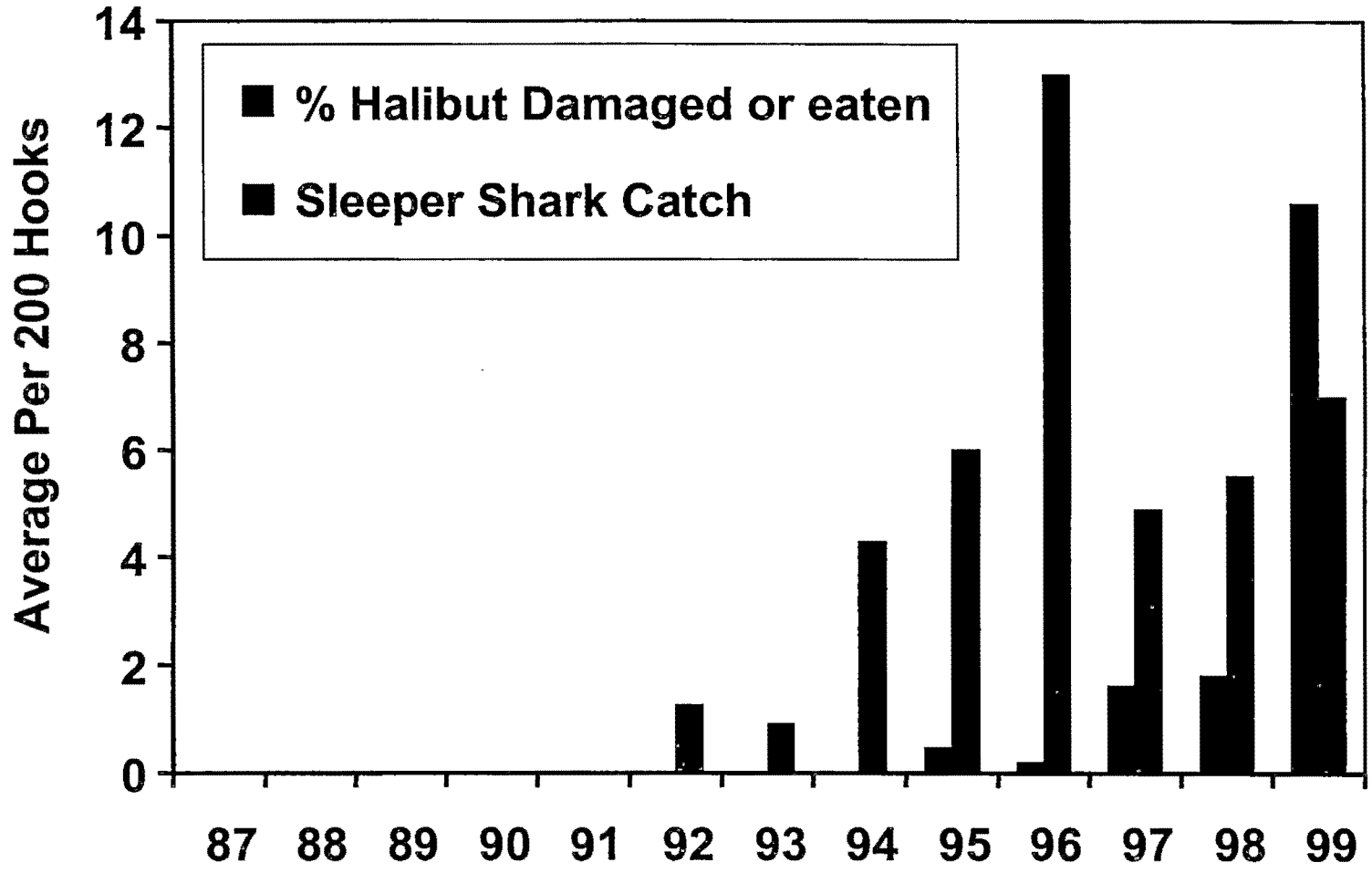

Figure 3. Average Pacific sleeper shark bycatch and percent halibut damaged per 200 hook set. The data was collected by Kathy Frost from her personal halibut IFQ in the same area in Prince William Sound from 1987- 1999.

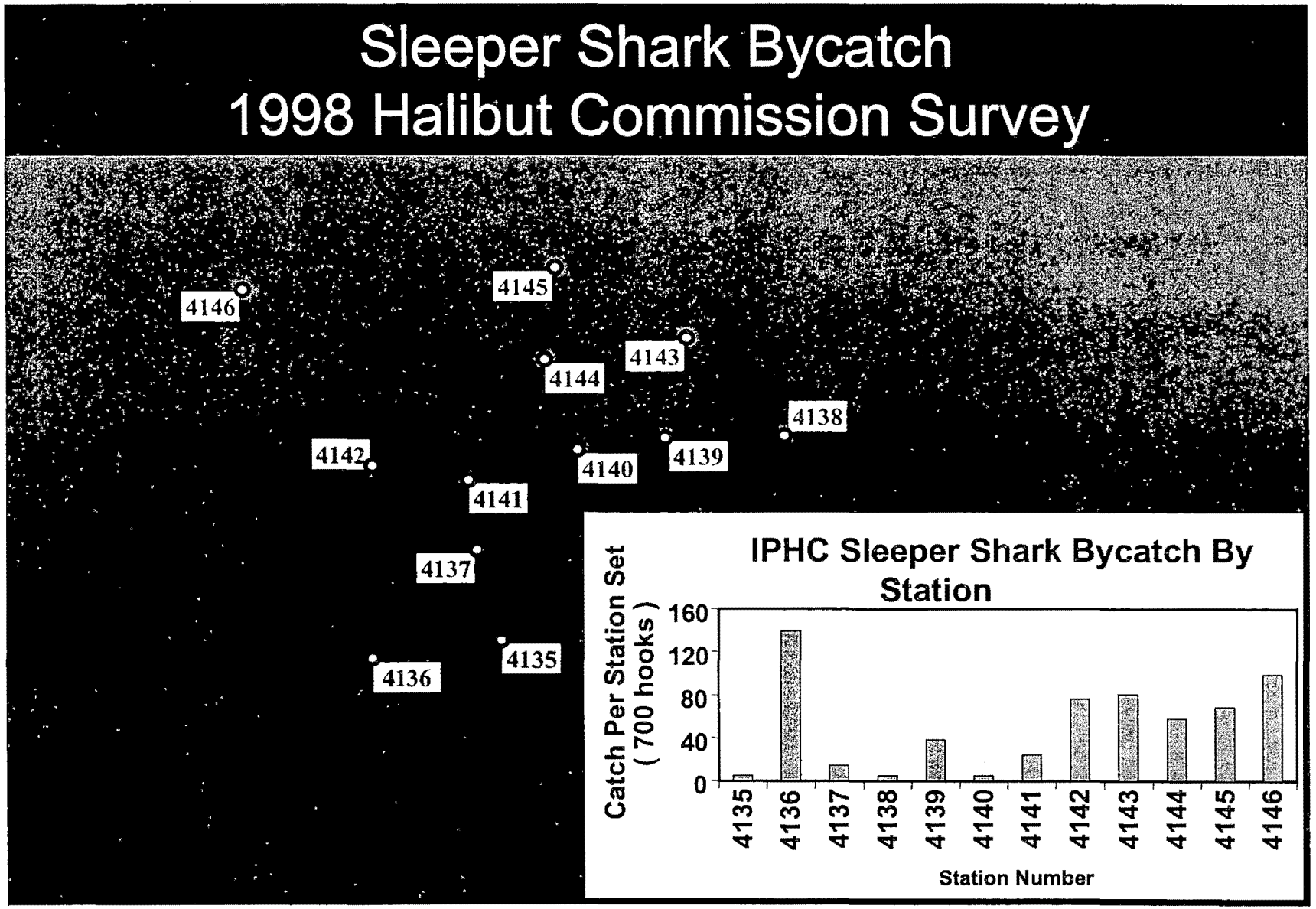

Figure 4. International Pacific Halibut Commission Pacific sleeper shark bycatch per station set (700 hooks) in 1998. Raw data courtesy of IPHC data management specialist, Dan Randolf, 2000 pers. Comm.

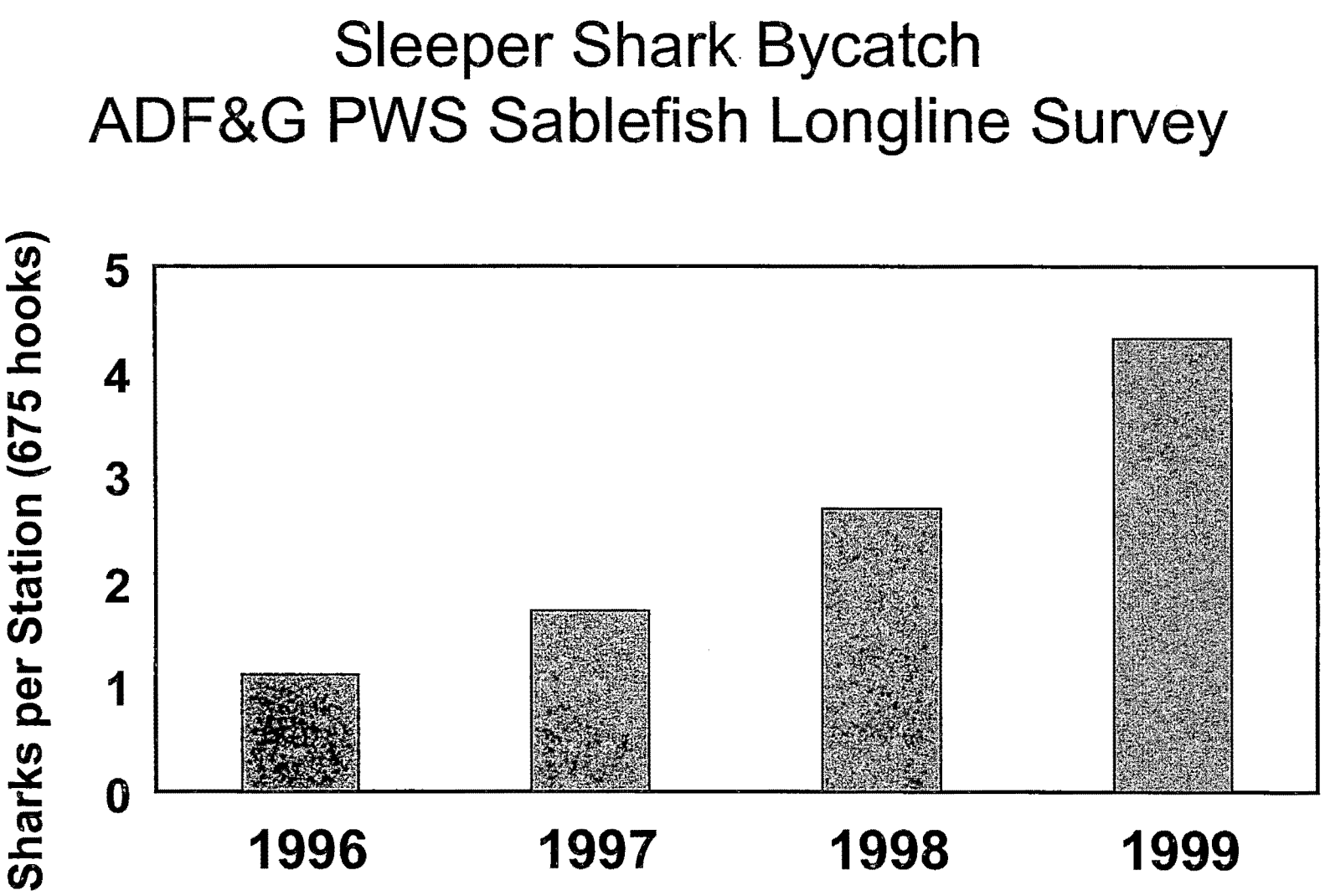

Figure 5. Alaska Deparment of Fish and Game Pacific sleeper shark bycatch in sablefish longline survey from 1996 to 1999. The data are grand means across all station sets per year. From: Bechtol, W.R., ADF&G, Homer, Alaska, Unpublished Data

Salmon Shark Time at Depth, July-September

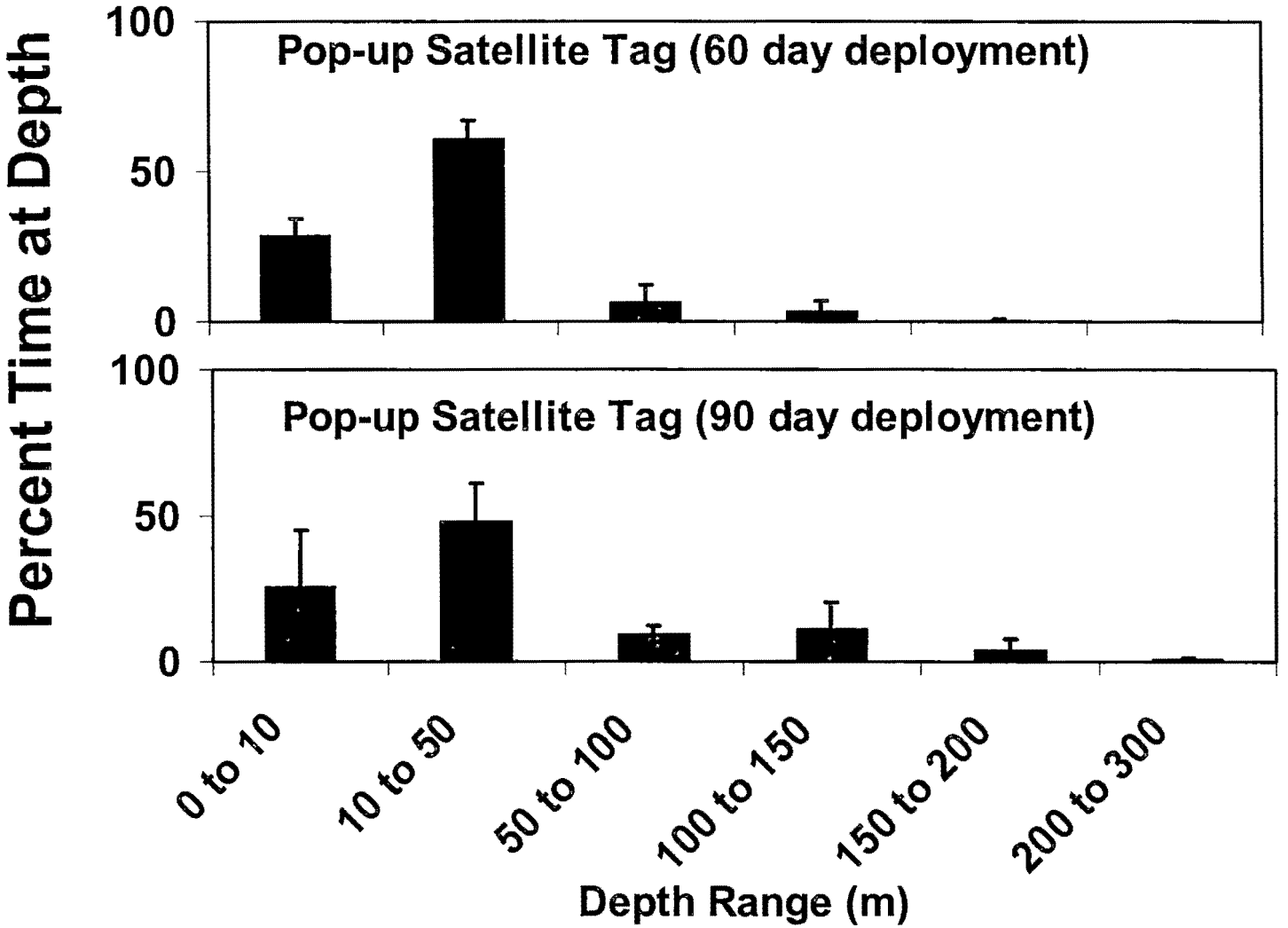

Figure 6. Percent time at depth of salmon sharks deployed with wildlife computers pop-up archival satellite tags (PAT tags). The data are standardized for the time period between late July and late September and indicate that the sharks spent the majority of the time in the 10 to 50 m range. Tags and data courtesy of Dr. Barbara Block, Stanford University 1999.

Revision 2 100

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FFY 1999	Proposed FFY 2000						
Personnel	$0.0	$26.4						
Travel	$0.0	$6.0						
Contractual	$0.0	$24.3						
Commodities	$0.0	$23.6						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$80.3	Estimated FFY 2001	Estimated FFY 2002				
General Administration	$0.0	$5.7						
Project Total	$0.0	$86.0	$100.0	$0.0				
Full-time Equivalents (FTE)	0.0	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments: This project investigates shark abundance indices, movements, demographics, and trophic interactions in the eastern Gulf of Alaska (GOA) and Prince William Sound (PWS) utilizing existing fishery survey platforms for Pacific sleeper shark and spiny dogfish sampl [illegible] shark species as sentinels of change in the dynamic ocean climate and trophic structures in Prince William Sound and the Gulf of Alaska.

2000

Project Number: 00396
Project Title: Alaska Shark Assessment Project
Agency: NOAA

FORM 3A AGENCY PROJECT DETAIL

2/23/00

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:			GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 2000
	Name	Position Description					
	L. Hulbert	PI	GS9	6.0	4,400		26.4
							0.0
							0.0
							0.0
							0.0
							0.0
							0.0
							0.0
							0.0
							0.0
							0.0
		Subtotal		6.0	4,400	0	
						Personnel Total	$26.4

Travel Costs:		Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 2000
	Description					
	Juneau to Seattle (IPHC safety training))	450	1	3	225	1.1
	Juneau to Cordova (directed salmon shark survey)	374	1	10	225	2.0
	Juneau to Cordova (IPHC survey)	374	1	21	225	1.9
	Juneau to Cordova (ADFG blackcod survey)	374	1	12	225	1.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$6.0

2000

Project Number: 00396
Project Title: Alaska Shark Assessment Project
Agency: NOAA

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FFY 2000
vessel charter (11 days at $1,575/day)	17.3
fuel charges for vessel	2.0
shipping	2.0
ARGOS platform ($350/tagx4 PAT tags plus SPOT tag charges= $1.5K-5.0K)	2.0
seine net repair	1.0
LIDAR data analysis ($5.0K UAF contract)	
USFWS aerial survey data analysis ($3.0K-$5.0K)	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$24.3

Commodities Costs:	Proposed
Description	FFY 2000
Wildlife Computers PAT tag ($4.0k per tag x 3 tags)	12.0
Wildlife Computers SPOT tag ($2.5K per tag x 2 tags)	5.0
LOTEK data loggers (6 at $800 each)	4.8
Sonitronics pingers (6 at $300 each)	1.8
Commodities Total	$23.6

2000

Project Number: 00396
Project Title: Alaska Shark Assessment Project
Agency: NOAA

FORM 3B
Contractual
&
Commoditie

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 2000
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency
ROV		NOAA
scale		NOAA
sonar		NOAA
purse seine		ADFG
acoustic receiver array (Stanford University)		Stanford

2000

Project Number: 00396
Project Title: Alaska Shark Assessment Project
Agency: NOAA

FORM 3B
Equipment
DETAIL

Amendment 2-22-00

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
BIOLOGICAL RESOURCES DIVISION
Alaska Biological Science Center
1011 E. Tudor Road
Anchorage, Alaska 99503

IN REPLY REFER TO:

February 22, 2000

MEMORANDUM

To: Molly McCammon and Bob Spies, EVOS Trustee Council

From: James Bodkin and Brenda Ballachey

Re: Request for supplementary funds, Project 00423, for sea otter carcass surveys

Over the last year, we have collaborated with Dan Doak of the University of California Santa Cruz to estimate survival rates of sea otters, using a model which is based on ages at death of sea otters recovered as carcasses on beaches. The model results, described in a manuscript which recently has been accepted for publication in PNAS[1], provide compelling evidence of long-term injury from the EVOS. Briefly, the model involves a comparison of observed vs. predicted ages-at-death of sea otters prespill and postspill, using data from carcasses collected during 1976-98. Results indicate that postspill survival of sea otters in the western Sound was poor relative to prespill rates, and that as late as 1998, survival rates had not yet returned to prespill values. However, survival rates of younger age otters were increasing, suggesting that conditions were normalizing. These results are consistent with other observations on sea otters in western PWS, which suggest that the population in the most heavily oiled areas has not yet recovered (summarized in Draft Final Report, NVP Project, November 1999).

Carcass surveys and modeling efforts based on age-at-death data may provide one of the most efficient tools for monitoring recovery of sea otters. However, when the proposal for project 00423 (which includes continuing research on sea otter recovery) was submitted last spring, carcass surveys were not included as we had not yet completed the modeling work and did not recognize how valuable the model would be in assessing survival rates and population recovery. We are now requesting supplementary funding in this fiscal year to support the

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[1] *Long-term Impacts of the Exxon Valdez Oil Spill on Sea Otters, Assessed Through Age-dependent Mortality Patterns.* Daniel H. Monson, Daniel F. Doak, Brenda E. Ballachey, Ancel Johnson, and James L. Bodkin.

carcass surveys as an additional tool for monitoring sea otter recovery in PWS.

Objectives: Beaches in the Green Island area of western PWS were surveyed for carcasses in 1976-84 by Johnson (1987), and again in 1990-98. In addition, a limited number of beaches on Knight, Naked, and Montague Islands were sampled in 1996-1998. The ages at death data from sea otters collected since 1990 have been used to estimate age specific survival probabilities. During April 1999 we obtained about 30 additional carcasses from Green Island and Western Prince William Sound. Our objectives in 2000 will be to obtain a sufficient (>30) sample of ages at death of sea otters from oiled areas of Western Prince William Sound suitably large to allow re-analysis of the Monson et al. Survival model. The survival probabilities of this revised model will allow us to evaluate the progress of the EVOS affected sea otter population toward achieving survival rates that do not differ from those estimated prior to the spill. These results will provide an objective estimate of the recovery status of this recovering population. The precision of the model output will be determined by the number of carcasses recovered. If our ability to ascribe recovery is limited by sample sizes it may be beneficial to increase the sample size in FY 2001.

Methods: Age specific survival estimates will be generated based on age distributions of the dying portion of the population, will be evaluated through recovery of beach-cast sea otter carcasses in western PWS. Beaches will be surveyed once during late April or early May after snow melt but prior to summer revegetation, which may hide carcasses washed high on the beach by winter storms. Data recorded for each carcass include: (1) relative location of carcass on the beach, (2) relative condition and completeness of carcass, (3) position of remains relative to previous year's vegetation, (4) relative age (adult, subadult, pup), (5) sex, and (6) specimens collected (e.g., entire carcass, skull, baculum, none). Skulls (when present) will be taken from all carcasses and a tooth extracted for aging (Bodkin et al. 1997). Any fresh carcasses collected will be necropsied as soon as possible and tissue samples collected for potential toxicology and histopathology studies.

Schedule: Carcass collections will occur in late April of 2000. Teeth will be submitted for age determination to Matson's Lab in Montana in May with ages received by August. If more than 30 carcasses are discovered we will complete a rerun of the Monson et al. Model by December 2000.

The total budget for the carcass surveys is $27,400. We are requesting $14,800 from the EVOSTC; the USGS will cover the remaining $12,600.

Received 2-22

Budget Category:	Authorized FY 1999	Proposed FY 2000
Personnel		$0.0
Travel		$2.7
Contractual		$10.4
Commodities		$1.0
Equipment		$0.0
Subtotal	$0.0	$14.1
General Administration		$0.7
Project Total	$0.0	$14.8
Full-time Equivalents (FTE)		0.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
		Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

Comments:

This amendment is being requested to add surveys of sea otter carcasses to the rest of the work previously approved for project 00423.

USGS will contribute $12.6K in salaries for this work.

FY00

Prepared: 2/21/00

Project Number: 00423 amendment, Feb. 21, 2000
Project Title: Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators
Agency: USGS

FORM 3A
TRUSTEE AGENCY SUMMARY

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 2000
6 USGS biologists		various	0.5	0; being contributed by USGS		0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.5	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:		Ticket	Round	Total	Daily	Proposed
Description		Price	Trips	Days	Per Diem	FY 2000
Anchorage roundtrip to Whittier for 6 biologists and one boat						2.0
Roundtrip Anchorage to Santa Cruz for modeling		0.5	1	2	0.1	0.7
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$2.7

FY00

Prepared: 2/21/00

Project Number: 00423 amendment, Feb. 21, 2000
Project Title: Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators
Agency: USGS

FORM 3B
Personnel
& Travel
DETAIL

Contractual Costs:				Proposed FY 2000
Description				
Charter vessel for 10	days @	$1000/day		10.0
Age estimations on 40	teeth @	$10 each		0.4
When a non-trustee organization is used, the form 4A is required.			**Contractual Total**	$10.4

Commodities Costs:					Proposed FY 2000
Description					
Fuel for	whaler and	skiffs, 10	days @	$100/day	1.0
				Commodities Total	$1.0

FY00

Prepared: 2/21/00

Project Number: 00423 amendment, Feb. 21, 2000
Project Title: Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators
Agency: USGS

FORM 3B
Contractual & Commodities DETAIL

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 2000
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		New Equipment Total	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY00

Project Number: 00423 amendment, Feb. 21, 2000
Project Title: Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators
Agency: USGS

FORM 3B
Equipment
DETAIL

Prepared: 2/21/00

Exxon Valdez Oil Spill Trustee Council
Investment Policies

Introduction

The purpose of these policies is to provide the *Exxon Valdez* Oil Spill Trustee Council (the "Council") with a comprehensive set of guidelines for the proper management of its investment decisions. Pursuant to its responsibilities to administer natural resource damage recoveries from the Exxon Valdez oil spill, the Council must follow a procedurally prudent process when investing the Joint Trust Fund assets. Prudence is based on the conduct of the Council in managing the assets, and is evaluated by the *process* through which risk is managed, assets are allocated, custodians and managers are chosen, and results are supervised and monitored.

Today's standard of prudence places the emphasis on responsibilities related to the investment portfolio and its purpose, rather than on investment performance. The Council has the responsibility for the general management of the Joint Trust Fund's assets. It is responsible for setting and managing the Joint Trust Fund's investment policy. The Council is not an investment manager or investment specialist and is not responsible for the ultimate investment results. Although it is not possible to guarantee investment success, following the process outlined herein will significantly improve the odds of structuring an investment portfolio which will stand up to public scrutiny and benefit the Joint Trust Fund by providing an acceptable long-run return.

Council Responsibilities In General

Through a 1991 settlement of natural resource damage claims in *State of Alaska v. Exxon Corporation, et al., No. A91-083 CIV,* and *United States of America v. Exxon Corporation, et al., No. A91-082 CIV*, the State of Alaska and the United States, acting through trustees for natural resources injured by the Exxon Valdez oil spill ("Trustees"), are to jointly receive $900,000,000 in damages payable over a term of years. A substantial portion of these damages are required to be segregated and used by the governments for purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalent of natural resources and services lost or injured as a result of the oil spill. These monies, and the interest earned on them, are to be placed in a "Joint Trust Fund" administered by the Trustees. An integral part of this responsibility is to provide prudent and productive investment management of Joint Trust Fund assets and any other receipts as provided either by law or a decision of a Court of law.

A separate Memorandum of Agreement and Consent Decree (the MOA) entered into by the State of Alaska and the United States in *Civil Action No. A91-081*, described the co-management of these natural resource damage recoveries. The MOA specifies that the following officials act on behalf of the public as Trustees:

State of Alaska Members:

- Attorney General, State of Alaska;
- Commissioner, Alaska State Department of Environmental Conservation;
- Commissioner, Alaska State Department of Fish and Game;

U.S. Government Members:

- United States Secretary of Agriculture;
- United States Secretary of the Department of the Interior; and
- Administrator of the National Oceanic and Atmospheric Administration, United States Department of Commerce.

Subsequently the Council was created by the Trustees to manage the co-trustee relationship required under the MOA. The authority of the Council is governed by a 1992 Memorandum of Understanding ("MOU") between the state and federal Trustees. Under the terms of the MOA and MOU, all matters before the Council which require a vote, make a recommendation, approve or disapprove an item, or otherwise render a decision shall require the unanimous agreement of the six Council members or their designees.

The Council is responsible for the management of the Joint Trust Fund's assets. The Council has broad authority to engage experts and to delegate its investment responsibilities, as it deems appropriate. The Council, when formulating investment policies, has obligated itself to review the recommendations from the Executive Director. The Executive Director will consult with the Investment Working Group (IWG) and such other ~~advisers~~ consultants as the Council may retain from time to time. The IWG consists of one state and one federal Council member or designee, as determined by the Council, and appropriate state and federal officials and at least two investment experts, who are selected by the Executive Director. At least two members of the IWG must have experience and expertise in financial management and the management of institutional investment portfolios.

The Joint Trust Fund is currently held in the registry of the United States District Court and invested by the Court Registry Investment System. In 1999 Public Law 106-113 was enacted, allowing the Joint Trust Fund to be invested in accounts outside the United States Treasury. Under that legislation, such outside investments are limited to income-producing asset classes, including debt obligations, equity securities, and other instruments or securities that have been determined by unanimous vote of the Council to have a high degree of reliability and security. The Joint Trust Fund is also to be managed and allocated consistent with the Resolution of the Council adopted March 1, 1999 concerning the Restoration Reserve.

Mission Statement

The Council shall establish policy, set direction, and provide oversight and stewardship for the prudent investment and management of the Joint Trust Fund.

Investment Objectives in General

1. Achieve superior administrative and investment performance on a consistent basis when measured against a national universe of public funds.

2. Actual returns will equal or exceed target returns over time while limiting total risk to that which is appropriate to the investment time horizon.

3. Use the best known processes consistent with the Council goals and objectives, specifically but without limitation:

    - Good financial reporting;
    - Good custodian selection and evaluation;
    - Good manager selection and evaluation;
    - Asset allocation; and
    - Awareness of new investment alternatives.

4. Use excellent management practices, as evidenced by:

    - Staff longevity;
    - Independence; and
    - Education and training.

5. Regularly communicate the investment goals, objectives and performance results with the public.

Statutes

Section 311(f) of the Federal Water Pollution Control Act, as amended 33 U.S.C. 1321 (f) establishes liability to the United States and to States for injury, loss, or destruction of natural resources resulting from the discharge of oil or the release of hazardous substances or both and provides for the appointment of State and Federal Trustees.

The Memorandum of Agreement and Consent Decree (MOA) entered into by the State of Alaska and the United States in Civil Action No. A91-081, governs the use of the natural resource damages, paid by Exxon. The State and Federal Governments act as co-trustees in the collection and joint use of all natural resource damage recoveries for

the benefit of natural resources injured, lost or destroyed as a result of the 1989 *Exxon Valdez* oil spill.

The terms of the settlement are contained in the Agreements and Consent Decrees entered into by the State of Alaska and Exxon Corporation Civil Action No. A91-083, and United States of America and Exxon Corporation Civil Action No. A91-082.

The United States Congress in Public Law 102-229 recognized the MOA and Consent Decree. Alaska State Legislature recognized the MOA and Consent Decree in AS 37.14.400~~Chapter 1, FSSLA 1992~~.

Pursuant to Public Law 106-113, Joint Trust Funds may be deposited in the Natural Resource Damage Assessment and Restoration Fund and/or accounts outside the United States Treasury. The law requires that the funds are invested only in income-producing obligations and other instruments or securities that have been determined unanimously by the Council to have a high degree of reliability and security.

Guidance regarding the authorities and responsibilities of agencies that receive Joint Trust Funds is incorporated in the Procedures of the *Exxon Valdez* Oil Spill Trustee Council, adopted August 29, 1996.

Administration

The Executive Director and the Restoration Office manage the day-to-day administrative functions of the Council, and report directly to the Council. The 1993 Agreement between the State of Alaska and the *Exxon Valdez* Oil Spill Trustee Council requires that the State create and assign an exempt position, designated as the Executive Director of the *Exxon Valdez* Oil Spill Trustee Council, to be responsible to the Council. The State is further required to create and assign exempt positions from the State service to be responsible to the Executive Director for such senior positions under the Executive Director as are approved by the Council.

Any person appointed to the position of Executive Director to the Council shall serve at the pleasure of the Council and may be removed from the position only upon the unanimous vote of all members of the Council. Any person appointed to a senior staff position by the Executive Director shall serve at the pleasure of the Executive Director. Removal of any of these individuals, including the Executive Director, need not be based on cause and no property or other interest in continued employment is or may be created. An organization chart of the Restoration Office is shown on Table 1.

The Executive Director of the *Exxon Valdez* Oil Spill Trustee Council shall engage experts and contract for investment services, as the Council deems appropriate. This may involve entering into 'reimbursable services agreements' with State and/or Federal agencies (*e.g.*, the Alaska Department of Revenue and/or the United States

Department of the Interior) for personal services costs and associated contractual costs.

General Responsibilities of the Parties

Without limitation of any fiduciary, administrative, or other responsibilities, implied or expressed herein, the parties shall have the following responsibilities for the proper management and administration of the Joint Trust Fund. The parties shall include:

- Trustee Council
- Executive Director/Restoration Office Staff
- Investment Working Group
- Auditor
- Legal Counsel
- Bank Custodian(s)
- Investment Consultant(s)
- Investment Managers

Trustee Council

- Adopt prudent investment goals and objectives;
- Adopt an appropriate asset allocation strategy;
- Select one or more consultants, bank custodians, external investment managers, and legal counsel who may include the Alaska Department of Law and the United States Department of Justice;
- Control investment and administrative expenses, and incur only those costs that are reasonable in amount and appropriate to the investment responsibilities of the co-trusteeship;
- Provide for an annual, independent audit of the Joint Trust Fund's financial statements;
- Provide for an independent review of investment performance;
- Develop an annual budget;
- Adopt and implement an investment education policy;
- Report financial and investment policies and performance to the public; and
- Avoid conflicts of interest, and conform to the fundamental fiduciary duties of loyalty and impartiality.

Executive Director/Restoration Office Staff

- Maintain responsibility for the administration and management of the Restoration Office;
- Facilitate staff, which performs the administrative functions of the Council and ensures compliance with State and Federal law, the Memorandum of Agreement and Consent Decree, and the Memorandum of Understanding;
- Recommend budget strategies and proposals to the Council;
- Coordinate all administrative matters of the Council, including meeting agendas;

- Make recommendations concerning policies, investment strategies, and procedures in consultation with the Investment Working Group;
- Advise the Council regarding the selection of custodians, an investment consultant, and investment managers in consultation with the Investment Working Group;
- Account for and report on the investment activity of all funds under the investment responsibility of the Council;
- Advise the Council on the evaluation of investment policies and performance of the portfolios in consultation with the Investment Working Group;
- Develop, recommend and implement internal control policies and procedures in consultation with the Investment Working Group to ensure all investment assets are safeguarded;
- Monitor investment managers and custodians for compliance with investment policies established by Council; and
- Recommend and maintain the information systems adequate to fulfill the accounting, monitoring, investing, cash management and other information needs of the Council, in consultation with the Investment Working Group.

Investment Working Group

- Review investment policies, strategies and procedures;
- Make recommendations to the Executive Director concerning policies, investment strategies and procedures;
- Advise the Executive Director regarding the selection of custodians, an investment consultant, and investment managers;
- Provide other advice as requested by the Executive Director;
- Attend the asset allocation and investment manager performance review meetings of the Council;
- ~~Report~~ Brief ~~to~~ the Council at the Executive Director's request and/or at the request of a member of the Investment Working Group;
- Act as "prudent expert" on behalf of the Executive Director;
- Develop and recommend investment policy and strategy to the Executive Director;
- Develop and recommend internal control systems and procedures to the Executive Director to ensure all investment assets are safeguarded;
- Recommend to the Executive Director information systems adequate to fulfill the accounting, monitoring, investing, cash management and other information needs of the Council; and
- Advise the Executive Director on the evaluation of investment policies and performance of the portfolios.

Auditor

- Measure and validate financial statements and management of the Joint Trust Fund;

Background Note:
The auditor is selected by the Council. However, the Council does not have a direct say over the work of the auditor because audits are based upon an independent review of financial statements consistent with the standards prescribed by the American Institute of Certified Public Accountants in conformance with generally accepted accounting principles and Government Accounting Standards Board guidelines.

Legal Counsel

- Provide legal assistance and advice to the Council as required.

Bank Custodian

- Provide safekeeping and custody of all securities purchased by managers on behalf of the Council;
- Provide for timely settlement of securities transactions;
- Maintain short-term investment vehicles for investment of cash not invested by managers;
- Check all manager accounts daily to make sure that all available cash is invested;
- Collect interest, dividend and principal payments on a timely basis;
- Process corporate actions on a timely basis;
- Price all securities at least on a monthly basis, preferably on a daily basis contingent on asset class and types of securities;
- Lend securities at the direction of the Council;
- Value and monitor derivatives and the trades from which they emanate;
- Provide monthly, quarterly and annual reports;
- The Custodians generally are asked to provide data and reports directly to the Council and service providers on a regular basis; and
- Provide continuing education programs for the Council.

Investment Consultants

- Recommend strategic procedures and process;
- Identify problems, issues and opportunities and makes recommendations;
- Upon the request of the Council, prepare an asset allocation study together with alternatives;
- Assist with manager structure, selection, monitoring and evaluation;
- Monitor and evaluate the overall performance of the portfolio;
- Carry out special projects at the request of Council; and
- Provide continuing education to the Council and staff, as appropriate.

Background Notes:
The Council selects and appoints investment consultants to provide objective, independent third-party advice on specific investment classes, including debt and equity securities, real estate, alternative investments, and other areas where focused attention is needed. Investment consultants do not accept discretionary decision-making authority on behalf of Council. Investment consultants function in a research, evaluation, education and due diligence capacity for Council and are fiduciarily responsible for the quality of the service delivered.

Investment Managers

- Act as a "prudent expert" on behalf of the Council;
- Develop a portfolio strategy within the specific mandate and asset size determined by the Council;
- Manage, purchase and sell assets for the portfolio; and
- Act as a co-fiduciary for assets under its management.

Responsibilities of the Council

The statutory responsibility of the Council is to invest Joint Trust Fund monies in income-producing obligations and other instruments or securities that have a high degree of reliability and security. Although it is a matter of debate whether the Joint Trust Fund is a true trust or simply a misnomer for public money restricted to a particular use, the statutory responsibilities of the Council in the management of the Joint Trust Fund are best defined through analogy to the Restatement (Third) of Trusts which indicates that trust property shall be made productive with primary emphasis on the preservation of capital and due consideration for the maximization of income. When investing trust property, the trustee has a duty to conform to the terms of the trust, and to conform to applicable law in the absence of provisions in the trust. In the absence of contrary law or trust provisions it imposes the standard of the "prudent investor" which

> *". . . requires the exercise of reasonable care, skill, and caution, and is to be applied to investments not in isolation but in the context of the trust portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the trust."*
>
> Restatement (Third) of Trusts, §277

The standard of the "prudent investor" has been viewed as approving a portfolio theory of investments but does not impose a duty to maximize income. Indeed, the standard gives primary emphasis to preservation of the trust estate, while receiving a *reasonable* (emphasis added) amount of income rather than incur undue risks. Only where all else is equal should the trustee choose the investment that produces the greater return. In addition, the trust must be invested in such a way that the purpose of the trust is not thwarted. It is therefore imperative that investment policies and asset allocation strategies adopted by the Council reflect the underlying purposes and intent of the Joint Trust Fund.

Looking to the Restatement (Third) of Trusts, therefore, the responsibilities of the Council can be summarized as follows:

1. Take all actions for the sole benefit of the Joint Trust Fund.

2. Prepare written investment policies and document the process. In doing so the Council shall:

   - Determine the mission and objectives of the Joint Trust Fund;
   - Choose an appropriate asset allocation strategy;
   - Establish specific investment policies consistent with the Joint Trust Funds' objectives; and

- Select investment managers to implement the investment policy.

3. Diversify assets with regard to specific risk and return objectives appropriate to the intended use of the Joint Trust Fund.

4. Use "prudent experts" to make investment decisions.

5. Control investment expenses.

6. Monitor the activities of all investment managers and investment consultants.

7. Avoid conflicts of interest.

The Council and staff should regularly undertake continuing education relevant for their duties. Specifically, all Council members and key staff should participate in an educational program, which provides basic instruction on the four primary components of the investment management process:

- Investment responsibility and procedural process;
- Developing investment policy guidelines and designing optimal investment manager structures;
- Implementing investment policy; and
- Monitoring and controlling an investment program.

INDEMNIFICATION

State law, [AS 37.10.071(e)] provides that the State shall indemnify fiduciaries or an officer or employee of the state against liability for breach of a duty in exercising investment, custodial, or depository powers or duties to the extent that the alleged act or omission was performed in good faith and was prudent under the applicable standard of prudence. However, actions which do not fall within the area of good faith and prudent practices are not statutorily entitled to indemnification. Indemnification language consistent with AS 37.10.071(e) as well as the desire of State trustees to hold appointed investment managers and other appointed fiduciaries to high standards are included in contract language with such retained consultants.

Under AS 37.10.280, the State is required to ensure that trust assets and its own services are protected and in that respect the State may purchase insurance or provide for self-insurance retention in amounts approved by the State to cover the acts including fiduciary acts, errors and omissions of its board members and agents. The law requires that insurance must protect its board members and the State from liability to others and from loss of trust assets due to the acts or omissions of the trustees.

As a general matter, the Attorney General has advised members of State boards analogous to that of the Council that it would act in defense of such board member actions consistent with the provisions of AS 37.10.071(e), or would retain counsel to act in that regard. Although it is believed that state and federal trustees are not subject to liability based upon allegations of a breach of duty related to investment of the Joint Trust Fund, it is anticipated that the Attorney General would represent state trustees and other state employees in litigation arising out of the performance of their official duties related to the Joint Trust Fund. The United States and its officers and employees are not entitled to indemnification under AS 37.10.071(e). There are no comparable indemnification provisions under federal law. Federal employees are normally represented by the United States Department of Justice in litigation arising out of their official duties.

A fiduciary under Alaska law relating to the Council would be each person provided by law to manage the investments (AS 37.10.071(f)(3)). In this respect, the consultants retained by State trustees are not fiduciaries per se and as such are not entitled to the cross-indemnification for acts which were taken in good faith or within the scope of prudent behavior under AS 37.10.071. However, such consultants would certainly be held to a standard of care applicable to their standards of professional responsibility, and liability and a requirement to indemnify the Joint Trust Fund may be built into contracts. Auditors and investment consultants are not fiduciaries within the statutory definition of AS 37.10.071(f). However, a custodial bank may have certain fiduciary obligations to the extent that, for example, it is involved in short-term cash management and securities lending functions if such services are utilized.

Delegation of Authority

The Council, through the appropriate state and/or federal agencies, may contract for investment, custodial or depository services on a discretionary or non-discretionary basis to the State and Federal governments and their employees, or to independent investment management firms, banks, financial institutions or trust companies by designation through appointments, contracts or letters of authority.

Code of Ethics and Conflicts of Interest

The State trustees and employees of the Restoration Office are subject to the Alaska Executive Branch Ethics Act (AS 39.52). ~~Federal trustees would be subject to comparable federal laws.~~ In general, the State law provides that high moral and ethical standards are essential for the conduct of free government and that a Code of Ethics for the guidance of public officers will discourage those officers from acting upon personal or financial interests in the performance of their public responsibilities, and will improve standards for public service and promote and strengthen faith and confidence in public officers.

The State Code of Ethics provides that any effort to benefit a personal or financial interest through official action is a violation. The Code details specific prohibitions pertaining to the abuse of official position, acceptance of gifts, improper use of disclosure of information and improper influence. ~~Perhaps the most common potential for a violation of the State Ethics Act arises under the improper gift provision, which has been interpreted in regulation and attorney general's opinion from time to time. AS 39.52.130 provides:~~

> ~~*"**Improper gifts.** (a) A public officer may not solicit, accept, or receive, directly or indirectly, a gift, whether in the form of money, service, loan, travel, entertainment, hospitality, employment, promise, or in any other form, that is a benefit to the officer's personal or financial interests, under circumstances in which it could reasonably be inferred that the gift is intended to influence the performance of official duties, actions, or judgment.*~~
>
> ~~*(b) Notice of the receipt by a public officer of a gift with a value in excess of $150, including the name of the giver and a description of the gift and its approximate value, must be provided to the designated supervisor within 30 days after the date of its receipt if the public officer may take or withhold official action that affects the giver.*~~
>
> ~~*(c) In accordance with AS 39.52.240, a designated supervisor may request guidance from the attorney general concerning whether acceptance of a particular gift is prohibited.*~~
>
> ~~*(d) The restrictions relating to gifts imposed by this section do not apply to a campaign contribution to a candidate for elective office if the contribution complies with laws and regulations governing elections and campaign disclosure."*~~
>
> ~~*(e) A public officer who, on behalf of the state, accepts a gift from another government or from an official of another government shall, within 60 days after its receipt, notify the Office of the Governor in writing. The Office of the Governor shall determine the appropriate disposition of the gift. In this subsection, "another government" means a foreign or the government of the United States, another state, a municipality, or another jurisdiction.*~~
>
> ~~*(f) A public officer who knows or reasonably ought to know that a family member has received a gift because of the family member's connection with the public office held by the public officer shall report the receipt of the gift by the family member to the public officer's designated supervisor if the gift would have to be reported under this sections if it had been received by the public officer or if receipt of the gift by the public officer would be prohibited under this section.*~~

By law, the State trustees are subject to conflict of interest disclosure requirements of AS 39.50 which includes the delivery of annual reports on financial and business interests to the Alaska Public Officers Commission. ~~Federal trustees would be subject to similar provisions in federal law.~~

All federal government employees are subject to the standards of conduct provided by the Ethics in Government Act of 1978, Public Law 95-521, as amended, including the Ethics Reform Action of 1989, Public Law 101-194. The statutory prohibitions are found in Title 18 of the United States Code, Sections 201 through 209, which include representational activities, conflict of interest, and dual compensation. Standards of conduct for all government employees are also delineated by Executive Order 12674, as amended by Executive Order 12731. The federal standards of conduct are further delineated in the regulations of the Federal Register, and include acceptance of gifts from outside sources; gifts between employees; gifts from foreign sources; acceptance of travel and related expenses; outside work; honoraria; outside activities; political activity; lobbying; procurement; misuse of government time, equipment, and information; nepotism; negotiating for non-federal employment; post employment; disclosure of financial interests; and penalties. The Department of the Interior, Commerce and Agriculture have additional ethics standards and requirements for all of their employees, including annual training and financial disclosure statements for specific persons, which include members of the Trustee Council.

STRATEGIC ASSET ALLOCATION POLICY IN GENERAL

The Council recognizes that strategic asset allocation is the single most important policy decision affecting portfolio return and risk. At least annually, the Council will evaluate its current strategic asset allocation policies. The current policies will be compared with potential alternative policies on a consistent basis.

The specific status of the Joint Trust Fund, including funding status, earnings assumptions, liquidity requirements, and expected growth shall be considered. The Council's investment consultant will use a "mean variance" optimization approach to evaluate the current and alternative policies. The specific inputs to the modeling process will be defined and contrasted with actual historic results. The implications for expected return and risk will be considered over multiple time horizons. The development of optimized asset allocations requires estimates of risk (standard deviation of returns for each asset class), the modeled return for each asset class, and the correlations of each asset class with other asset classes. The strategic analysis will include those asset classes for which the Council believes reasonable inputs are available. Asset subsets where meaningful historic data are not available shall not be considered as a part of the strategic asset allocation analysis. Such subsets or categories, however, may be included as part of an appropriate broad asset category.

Manager Structure

Within each major asset category, the Council will determine an appropriate management structure. The structure analysis will consider the potential benefits, risks and costs associated with utilizing active versus passive investment approaches, varied investment philosophies and approaches and vendor diversification.

For each major asset category, the Council will strive to achieve a structure that assures potential exposure to the entire asset category. Particular emphasis, however, may be placed on those subcategories or approaches where the Council has determined the potential benefits are superior to alternative approaches. For example, with respect to international exposure, the management structure may result in a systematic asset allocation bias in favor of developed markets and a corresponding bias against emerging market. Similarly, with respect to domestic equities, the structure decisions may result in a slight bias in favor or against a particular investment style. All such decisions shall be conscious decisions. Unless explicitly decided to the contrary, assets within each major asset category shall be allocated among managers so as to achieve broad diversification and aggregate return and risk profiles similar to the broad market.

At least annually, the Council shall review its management structure to ascertain that desired diversification is being achieved. The Executive Director, in consultation with the IWG, staff, and investment consultants shall prepare such analysis and recommendations for the Council's consideration.

Manager Selection

A rigorous, objective due diligence process will be utilized in the selection of all investment managers retained by the Council. The analysis will be conducted by the Council's investment consultant. The managers' roles in the Council program and specific evaluation criteria will be defined prior to the identification of potential candidates. Candidates will be evaluated both quantitatively and qualitatively.

- Quantitative factors will include a comprehensive analysis of historic performance over a variety of market environments. Candidate performance will be evaluated relative to appropriate market indices and peer groups. Candidates will be analyzed to determine whether portfolio construction has adhered to their stated investment styles.

- Qualitative factors such as ownership structure, depth of staff, professional expertise, experience managing comparable portfolios, key employee incentives, stability, and potential conflicts of interest also will be considered.

The consultant will identify a semi-finalist group of candidates. All semi-finalists will be judged by the consultant as capable of meeting the Council's needs. The Council will interview all or a portion of the semi-finalist group and make the final selection. The

IWG's recommendations to the Executive Director shall be solicited as an integral part of this process.

Guidelines for Manager Termination

The performance of the Council's investment managers will be monitored on an ongoing basis. The Council may place a manager on a "Watch List" or terminate a manager at any time. The Council may, by separate resolution, adopt specific criteria to be utilized in identifying developments, which would cause a manager to be placed on a "watch list" and removed from such a list.

Securities Lending

The Council may enter into a securities lending arrangement with an agent(s) when the Council concludes that such arrangements would be beneficial to the Joint Trust Funds. Securities lending services may be provided by the Council's bank custodian or an independent service provider. Securities lending programs result in the agent undertaking a direct or indirect asset management function. The Council will use the same skill and due diligence in the evaluation and selection of such agent(s) as utilized in the selection of money managers.

Rebalancing Guidelines

The Council may periodically instruct staff to shift and/or limit staff's authority to shift assets within asset classes and/or among asset classes. Unless restricted by Council action, the Executive Director or an appropriate designee shall have discretion to move assets among investment managers and asset categories provided that such actions are consistent with movement of the actual asset allocation within the variability bands of the Council's strategic asset allocation policy and manager structure targets. Such adjustments to the actual asset allocation may be made without prior Council approval when the actual asset allocation falls outside of the variability target bands at end of a calendar month. The Executive Director shall make the necessary adjustments to the initial target allocation within 30 calendar days. Staff shall report any asset shifts at the next regular Council meeting. Such reports will include a description of the rationale for the shift.

INDIVIDUAL ACCOUNT PROGRAM OBJECTIVES

The Council is responsible for the prudent investment of the Joint Trust Fund within the defined purpose and investment objectives of each program mandated by law and policies of the Council. The Council anticipates that the Joint Trust Fund (Restoration Reserve), along with other unallocated funds and accrued interest, will have a fair market value of approximately $170 million on or about October 1, 2002. Consistent with the March 1, 1999 resolution funds in the Restoration Reserve and other remaining unobligated settlement funds available October 1, 2002, shall be allocated in the following manner:

- $55 million of the estimated funds remaining on October 1, 2002 and the associated earnings thereafter will be managed as a long-term funding source, with a significant proportion of these funds to be used for small parcel habitat protection.; and

- The remaining balance of the funds on October 1, 2002 will be managed so that the annual earnings, adjusted for inflation, will be used to fund annual work plans that include a combination of research, monitoring, and general restoration.

Consequently, the Joint Trust Fund has a twofold investment mandate: (1) short-term liquidity for ongoing habitat restoration purposes, including the probable acquisition of lands, and (2) a long-term endowment to generate future income. Future land purchases are subject to ongoing negotiations and the timeline of their corresponding investments cannot be determined until such negotiations are concluded. The investment horizon of these funds would change based upon the probable acquisition date.

Each program mandate shall be evaluated relative to an appropriate market benchmark and also relative to an appropriate peer group of competitive alternatives. The number of investment options and the market benchmarks shall be determined by the Council.

Statement of Investment Objectives and Policies

Introduction

The Council hereby establishes the following Statement of Investment Objectives and Policies ("the Statement") for the investment of the Joint Trust Fund. The Council assumes full and complete responsibility for establishing, implementing and monitoring adherence to the Council's policies. The Council reserves the right at any time to amend, supplement or rescind this Statement.

Investment Objectives

- Provide adequate liquidity for ongoing restoration purposes.
- Preserve the inflation-adjusted value of invested capital on endowment funds.
- Realize competitive, total rates of return.
- Incur minimum levels of risk that are appropriate to other long-term investment objectives.

Time Horizon

- Establish short and long-term investment objectives
- Evaluate performance over one-, three-, and five-year time periods, with primary emphasis for endowment funds placed on the longer time periods.

Benchmarks

Given the investment objectives and time horizons of the Joint Trust Fund, benchmarks are established to gauge progress towards their achievement. The benchmarks are as follows:

- Variability of total market value. The percentage change in the market value shall be contrasted to that expected from normal investment strategy.
- Competitive rates of return. (Unless specified otherwise, the following benchmarks are based on time-weighted rates of return.)
  1. For liquidity purposes, total annualized returns equal to inflation as measured by the U.S. Consumer Price Index of all Urban Wage Earners.
  2. For endowment purposes, the total annualized returns shall be established by separate resolution ~~of 4%~~ and shall be in excess of inflation as measured by the U. S. Consumer Price Index of all Urban Wage Earners.
  3. Total annualized returns should equal or exceed the return on a *passively* managed (market index based) portfolio with the same asset mix as the normal strategic asset mix.
  4. Total Joint Trust Funds' annualized returns should exceed the median return on an *actively* managed portfolio with the same asset mix as the normal strategic asset mix and comparable risk.
  5. The time-weighted, total rates of return shall be compared to the total rates of return for similar public funds.

- Passively Managed Strategic Benchmark. Performance shall be compared on a quarterly basis to that of a passively managed strategic benchmark. On a biannual basis, performance will be presented to the Council. However, the main purpose of this comparison shall be to contrast the long-term, actively-managed, pre-investment fee performance results versus that of a passively managed portfolio with an asset mix identical to the normal strategic asset mix. The passively managed strategic benchmarks shall be as follows:

Asset Class	**Market Indexes**
Cash	90-Day U.S. Treasury Bills
Broad Domestic Equity	Russell 3000 Index
Domestic Large Cap	S&P 500 Index
Domestic Small Cap	Russell 2000 Index
International Equity	EAFE Index
Domestic Fixed Income	Lehman Aggregate Index
Intermediate Fixed Income	Lehman Intermediate Gov't Index
International Fixed Income	Salomon Non-Dollar Gov't Bond Index

On a quarterly basis, an independent contractor shall calculate the *passively* managed strategic benchmark by multiplying the respective index total return times the normal strategic asset mix percentage. These statistics will be summed to generate a weighted average total passively managed benchmark return. For periods longer than one quarter, the quarterly returns, in factor form, will be chain-linked. In the case of periods longer than one year, the return shall be annualized.

- Actively Managed Strategic Benchmark. On a quarterly basis, an independent contractor shall calculate the *actively* managed strategic benchmark by multiplying the median actively managed portfolio return for each asset class segment times the normal strategic asset mix percentage. These statistics will be summed to generate a weighted average total actively managed benchmark return. For periods longer than one quarter, median returns for each asset class segment shall be determined for the length of the period and then multiplied times the appropriate normal strategic mix percentage. Those statistics will also be summed to generate a weighted average total actively managed strategic benchmark return.

- Asset Class Segments. To maintain an efficient risk/return profile and for the purpose of setting objectives and policies for the different asset classes, assets shall be structured into domestic equity, international equity, domestic fixed income, and international fixed income segments. Collectively and/or individually, portfolios shall be called Managed Account(s), whether the investments are direct or through units of commingled funds. Managed Account investments shall be made with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent investor acting in a like capacity and familiar with these matters would use in the conduct of Trust Funds of like character and with like aims.

- Select investment managers to implement the investment policy.

3. Diversify assets with regard to specific risk and return objectives appropriate to the intended use of the Joint Trust Fund.

4. Use "prudent experts" to make investment decisions.

5. Control investment expenses.

6. Monitor the activities of all investment managers and investment consultants.

7. Avoid conflicts of interest.

The Council and staff should regularly undertake continuing education relevant for their duties. Specifically, all Council members and key staff should participate in an educational program, which provides basic instruction on the four primary components of the investment management process:

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~~Under AS 37.10.280, the State is required~~The Trustee Council may wish to ensure that trust assets and its own services are protected and in that respect ~~the State~~ may purchase insurance or provide for self-insurance ~~retention in amounts approved by the State~~ to cover the acts including fiduciary acts, errors and omissions of its ~~board~~ members and agents. ~~The law requires that insurance must protect its board members and the State from liability to others and from loss of trust assets due to the acts or omissions of the trustees.~~

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ANCHORA DAILY NEWS
Februar , 2000

Aquarium reluctant to be first

Developer wants to see city building next door

By TONY HOPFINGER
Daily News reporter

Erik Pedersen still wants to build a $20 million aquarium along Ship Creek, which would move visitors through a 300-foot tube surrounded by salmon, halibut and other Alaska sea life.

But he said his aquarium project is on hold until city plans to develop a neighboring site firm up. His half-dozen Alaska investors worry the aquarium would be the only attraction in a stark industrial district that has seen development dreams come and go through the years, he said.

Erik Pedersen sees ghosts of failed Ship Creek projects.

"Being in Ship Creek is sort of like being on the frontier," said Pedersen, president and chief executive of Texas-based U.S. Aquarium Team Inc. "There is a little bit of a ghost because (Ship Creek) has been the target of a number of failed development plans."

Despite Pedersen's hopes to start construction this spring, some people following the project said that probably won't happen. Also, some tour operators — critical to flowing tourists through an aquarium — said they are

See Back Page, AQUARIUM

Continued from Page A-1

only dimly aware of his plans.

Pedersen said that before he starts construction, he wants "to know with great certainty" that the city will build a federally funded fisheries complex next to his proposed site.

That might mean he will have to wait until Congress shows him the money, he said.

For years, the Alaska Railroad and city have been trying to develop the Ship Creek district.

The unfulfilled dreams range from a private planetarium to Mayor Rick Mystrom's controversial proposal to dam the salmon creek to create an urban lake.

Mystrom's most recent proposal is a fisheries complex and aquarium on 8.5 acres of railroad property just west of the railroad's headquarters building.

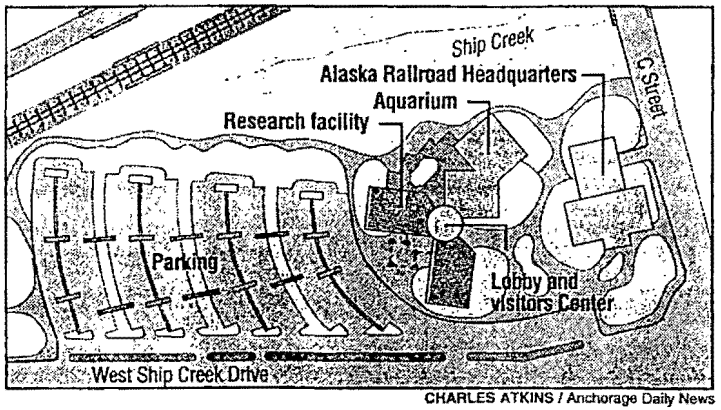
Last year, the mayor's idea split into two when Pedersen said he was interested in building a private aquarium, similar to one he completed in 1999 in Guam. It would feature a tube that visitors would walk through to view marine life.

Meanwhile, U.S. Sen. Ted Stevens last year offered support to Mystrom's fisheries complex, promising to funnel federal dollars for the first phase, which would cost $21.5 million.

The complex could offer programs to educate the public about Alaska's ties to the fishing industry. It could also serve as a meeting center for industry gatherings and help researchers for different agencies collaborate more, according to supporters.

A few months ago, Stevens' office announced Congress had given $3.5 million to the project. The rest of the federal money would come over the next two or three years, according to Mystrom's office.

Proposed fisheries complex and aquarium near Ship Creek



CHARLES ATKINS / Anchorage Daily News

"The thing that gives me a little pause is that whenever you are relying on federal funding, you don't have it until you have it," Pedersen said. "I would like to know what the backup plan is if federal funding falls through."

People working on the fisheries complex say not to worry. The initial $3.5 million will fund planing and designing of the facility. Stevens will deliver the remaining money, they said.

"This is very high on the senator's radar screen," said James Dougherty of Cash Barner Architects in Anchorage, who is the city's project leader for the federal complex. "He shares the mayor's vision and understands that this will help act as a catalyst for development in that area."

A Stevens spokeswoman stressed the funding depends on Congress' approval.

Dougherty's firm is also the architect for Pedersen's aquarium. It designed the aquarium in Guam, which Pedersen said "is on the way to being profitable."

Dougherty doubts construction of the Anchorage aquarium will start this year. "The fisheries support center has a big bearing on Erik's planning," he said. "Both projects are not much more than ideas right now."

Another matter that must be settled is a public visitor center, which Pedersen believes should link the aquarium and complex. He would build the center if the city helped pay for it.

The center would offer a relaxing setting for tourists arriving on the train at the Ship Creek depot and serve as a place to corral visitors headed on tours to Denali National Park and Preserve and other places, he said.

It would have a lounge, restaurant and conference room, he said. After visitors toured the aquarium, they could head up — possibly on a covered moving walkway — to their downtown hotels, he said.

Pedersen is trying to promote his vision for Ship Creek to tour operators, which he hopes would channel hordes of tourists through the aquarium. That would be crucial for the aquarium to be financially successful, he said.

Holland America, one of the two biggest tour operators in Alaska, hasn't made any promises to Pedersen but is interested in hearing his ideas, spokesman Erik Elvejord said.

"An aquarium would certainly be an attention grabber," Elvejord said. "P go to Alaska for the sce wildlife and culture. An aquarium would definitely fit in with that."

Not everybody is thrilled with Pedersen's plans.

Officials at Seward's Alaska SeaLife Center remain concerned that the aquarium would steal business from their research aquarium.

The sea life center was built with $26 million from the Exxon Valdez oil spill settlement and a $17.5 million Seward city bond. The center has been losing money.

"In my view, this is a totally misguided project," said Dale Lindsey, who sits on the boards of the sea life ce and Alaska Railroad. " trary to what people have said, Erik's aquarium will compete for admission dollars with the sea life center."

But Pedersen said his aquarium would differ from the SeaLife Center because it wouldn't have marine mammals.

Perhaps a promotional partnership could be formed between the two attractions, he said.

Reporter Tony Hopfinger can be reached at 257-4344 or thopfinger@adn.com.

SEWARD PHOENIX LOG
February 17, 2000

SewardOpinion

Free admission during inspection

SeaLife Center Update

By Linda Ashley

For the Seward Phoenix LOG

Over the next few weeks, the SeaLife Center will undergo an inspection of the three main habitats, as well as several of the animal curatorial areas and the research overlook. The animals these habitats have been moved to the research outlook and can be seen from windows in that area.

The harbor seals and Steller sea lions probably will have been returned to their habitats by Feb. 16 and the birds will be returned to their area by Feb. 27.

While these habitats are empty, the other aquariums are full of marine life, and the center is offering free admission to see them.

Octopuses trading places

Kasitsna, the center's second largest octopus, has been taken from the denizens of the deep exhibit to the wet lab. The lovely and much-grown-up Ophelia is back in the display on the right-hand side.

Ophelia was our first octopus and is known to be at least 4 years old. Age is very difficult to determine in octopuses because they ve indeterminate rates of owth. Since this species is reported to live only 3 to 5 years, we want to keep Ophelia on exhibit where everyone can enjoy her for as long as possible.

Ulu, who once delighted visitors by opening peanut butter jars to retrieve his snacks at the discovery pool, is in the left hand side of the exhibit and is doing well.

Octopuses in the discovery pool exhibit have been traded. Orie was being a nuisance and covering the skimmer, resulting in flooding around the tank. While it was great fun for her, it was not so nice for those who had to clean up after her. She is now in the wet lab and a smaller male octopus (R1) is at the discovery pools.

Castellini's journey ends

Bad weather, high winds, snow and heavy seas plagued the final leg of Castellini's research trip in Antarctica.

As a consequence of the weather, on one of the trips, the team was let down off the ship's bow in a sling from a crane. They were after a Ross seal some 200 meters away. The ice was not very thick and the team kept sinking into snow and water. Castellini said it was like trying to work on a 300-pound seal in a giant 2-foot Slurpee.

One of the team's last research subjects was a female Weddell seal. She was large and tough — she bit one of the graduate students trying to corral her (the student is OK). Although she seemed determined not to be a research subject, through some creative maneuvering, the team got their samples anyway, apparently to the delight of onlooking emperor penguins that came up on the ice to watch the goings-on.

According to Castellini, it was a fabulous cruise, with the team seeing things no one else has ever seen and going places no one else has ever been. They studied more Ross seals than has ever been done before, found the locations where emperor penguins molt after the summer in their rookeries, caught new species of fish in their nets and made the most dives ever in the Antarctic pack ice.

The trip was the second part of the three-year project. The rest of the project time will be spent analyzing the data collected. A month from now, the research teams will be in their offices doing just that.

Linda Ashley is the Alaska SeaLife Center membership sales manager.

KODIAK DAILY MIRROR

FEBRUARY 14, 2000

GEM project to be explained

Kodiak Audubon Society invites the public to attend a presentation by Molly McCammon & Phil Mundy of the Exxon Valdez Oil Spill Trustee Council Staff.

They will discuss the proposed GEM (or Gulf Ecosystem Monitoring) Project.

The Gulf Ecosystem Monitoring project is the Trustee Council's commitment to developing an endowment for research and monitoring in the northern Gulf of Alaska that will help sustain healthy resource populations and their use by people.

The meeting will take place on Friday, Feb. 18, at 7:30 p.m. at the Fishery Industrial Technology Center. For more information, call Linda at 486-0822.

OPINION

Point of View

Cook Inlet belugas need our prompt attention

by Paul McCollum

It is so frustrating to me that concerned citizens and organizations continually have to push, prod, argue, encourage or even legally challenge the regulatory agencies that are charged with protecting our environment and our health. Is it so unreasonable to expect these agencies to act on our behalf rather than corporate interests?

We should be able to expect them to reasonably address issues of importance, especially as we find ourselves steam-rolling, if not actually engaged in hyperdrive, toward continued environmental degradation that is placing our future on this planet and most of our wilder roommates in serious question.

A case in point is the current fate of beluga whales in Cook Inlet, which have experienced a rapid decline in both their population and health in recent years. Fewer than 350 whales remain from a population that may have once been over 1,000. The unadjusted actual counts last year were between 150 and 217 depending on to whom you talk. The annual National Marine Fisheries Service population estimates from 1994 to1998 were 653, 491, 594, 440 and then 347, respectively.

Numerous accounts from Native hunters have described increased findings of lesions and tumors on Cook Inlet beluga whales. No matter how you look at the numbers or the larger situation, it is clear that the population is in danger of extinction. That in itself should be enough to invoke the full strength of the Endangered Species Act, which was created for exactly this type of situation. Genetic studies of Cook Inlet belugas show they've been isolated from other stocks for over 10,000 years and are a distinct sub-species.

Despite near-extinction and even after all the review that has gone on these last two years for this clearly endangered population, NMFS seemed to have bowed to the pressure of the industry and their respective state and Anchorage mouthpieces and decided to list them as threatened rather than endangered. This listing has a much lower degree of protection and it is unlikely that the population would be able to recover as a result of it.

NMFS apparently assumes that Cook Inlet belugas can still survive hunting quotas of three whales per year. A larger endangered population of belugas (700 unadjusted aerial count) in Canada's St. Lawrence River, are protected completely for many years from hunting, pollution, development, and maritime traffic and the population has just barely held its own with no growth at all.

Since even healthy belugas produce just one calf every three years, high death tolls from hunting, strandings and pollution can severely impact an already endangered population. What if the 58 Cook Inlet belugas beached near Anchorage on Aug. 30 all died?

As it happened, only three died and one was sampled by a federal agency. But surprisingly no lab work was done on that sample. The Alaska Department of Environmental Conservation's Environmental Health Division also apparently refused to toxin-test a beached dead Cook Inlet beluga that Tyonek villagers scavenged Aug. 30. Are they afraid to find out something? Perhaps it's a lot more convenient to place all the blame on the Native hunters than deal with the whole issue, which will obviously includes all factors including pollution and industrial activity in Cook Inlet.

It is very important that we take advantage of the recent turn of events thanks in large part to the petition by the Native hunter Joel Blanchford and several conservation organizations and more recent legal challenges to the disappointing "threatened" classification. The diligent efforts of many citizens and organizations have successfully reopened the issue. We have one last chance to provide comments to National Marine Fisheries Service by next week. The state Department of Environmental Conservation is also accepting public comment until early February. Please think about a short letter, e-mail or phone call to NMFS and ADEC to tell them we want them to list Cook Inlet beluga whales as endangered under the federal Endangered Species Act. The Cook Inlet Keeper probably would tell you the exact deadline dates and addresses.

The ESA requires that a population be listed as endangered when it faces the threat of extinction from overutilization, when existing regulatory mechanisms are inadequate, when its habitat is threatened, when it is vulnerable to disease or predation, and when there are other manmade factors affecting its continued existence. Hello! Anybody home?

Every one of these factors is challenging the Cook Inlet beluga population. It is important that we also request a critical habitat designation for Cook Inlet beluga whales in conjunction with the ESA listing.

These beautiful animals desperately need our help. Please take a few minutes and jot down a few lines to list Cook Inlet belugas as endangered along with a critical habitat designation. They have been damaged to the point of potential extinction by our negligence and lack of concern. Now they must rely on any compassion and assistance we might have to offer them. Let's give them hope, a chance to hold on to their very existence so that our children and theirs can know each other in a future beyond us.

Paul McCollum is a marine biologist and former member of Cook Inlet Regional Citizens Advisory Council.

Sea otter pup, Adaa, flourishing in new Oregon home

By Linda Ashley
For the Seward Phoenix LOG

Runway — named Adaa (meaning "move over"), the sea otter pup stranded on the airport runway at Port Heiden, is doing well at the Oregon Coast Aquarium in Newport, Ore. Adaa now is eating about 15 pounds of food a day and is looking healthier every day. He is grooming his fur and sleeps in the water most of the time instead of on the haulout. Nighttime feedings will stop soon now that he's at a good weight.

U.S. Fish and Wildlife Service policy dictates that once a sea otter pup is taken from the wild in Alaska, it cannot be returned to the wild. If orphaned pups cannot find homes in zoos or aquariums, they must be euthanized.

Sea otters once were found from California to Alaska. But in 1906, the last Oregon sea otter was killed just north of Newport.

SeaLife Center Update

Castellini's research trip nears end

While working on a crabeater seal in Antarctica, Dr. Mike Castellini and staff found themselves sinking hip-deep in crusty snow. Several times they rescued each other by pulling the "sinkee" out of their boots, then digging out the boots. There was concern about falling into deep snow and having a seal roll over onto them.

Later, a large leopard seal was spotted after it came to the edge of the flow it was on to check out their Zodiac. While they are very large predators, Castellini reported that no one has been attacked by one while in a Zodiac — not yet.

Castellini and his staff did their last seal sampling Feb. 8 on their way back to McMurdo Station, the main Antarctic base. They have been taking weights, blood and blubber samples, and ultrasounds on crabeater and Ross seals for the past several days.

He originally estimated that they would be able to process 160 seals during the research period and so far they have processed 127. With a few days to go, they might make the 160.

The staff have had problems with malfunctions of some equipment due to extreme cold.

Steller sea lion observers needed

The ASLC is looking for a few dedicated volunteers to observe Steller sea lion mating rituals at the center. Call Amy at 224-6304 for more information.

Deep gulf display

Three female golden king crabs, lithodes aequispinus, also known as brown king crab, have been added to the deep gulf display in the underwater viewing area. This species is the fourth largest shellfish fishery in the state. The females have yellow tags because they are part of an ongoing study at the University of Alaska to better understand the reproductive biology of this species.

Chiswell exhibit upgraded

The Chiswell Island live-video exhibit has a new component — a computer kiosk called "The Interactive Rookery." It features video clips recorded on the rookery during the summer.

Visitors can see footage of Steller sea lion birth, of mothers with their new pups, and of the large bulls on the beach.

The kiosk also displays pictures of the camera system and explains how it works.

Rehab race canceled for now

The Feb. 13 SeaLife Ski 2000 6-kilometer race to raise funds for marine mammal rehabilitation has been canceled due to the extreme weather conditions.

Linda Ashley is the Alaska SeaLife Center membership sales manager.

Student programs blend science and technology

By MIKE ROSTAD
Special to the Mirror

Island students are on the cutting edge of two programs that blend local, traditional knowledge with academic science and technology.

A team of Kodiak Island students and teachers participating in the Youth Area Watch, mapped out their research strategies recently at the Fisheries Industrial Technology Center on Near Island and winners of the regional village science fair traveled to Anchorage to compete in a statewide fair, sponsored by the American Indian Science and Engineering Society.

Teri Schneider, Alutiiq studies coordinator for the Kodiak Island Borough School District, is involved in both programs and sees them as a way of linking local people, who have time-tested practical knowledge, with professionals in the sciences.

The Youth Area Watch is a program that taps into community resources and helps students see the practical applications of science.

It got started by the Chugach Regional Resource Commission in Prince William Sound after the devastating Exxon Valdez oil spill in 1989.

After the disaster "the area was blasted with scientists and others trying to learn about the environment," Schneider says. "People are recognizing the value of local knowledge and information that hasn't been tapped into before."

Hugh Short, who represents the commission, which is funded by the Exxon Village Oil Spill Trustee Council, connected with Schneider who introduced the idea to local school district officials.

"Marine life has been given little attention," Schneider says. "This is a great opportunity to pull in the scientific community and do some sort of monitoring."

Monitoring involves a large number of activities, such as tracking the migration of whales and taking note of their diet, determining water turbidity and collecting tissue samples of subsistence-harvested seals, finding the best place to get shellfish, interpreting the data and putting conclusions on a computer website.

As students go about these projects, oral history, cultural appreciation, geography, and other skills and topics come into play, Schneider says.

At the recent planning session on Near Island, biologists and teachers with the University of Alaska Fairbanks discussed many ways in which students can monitor the marine environment and understand how everything interacts. The group also consulted with Old Harbor teacher Charlie Powers, via teleconference, and learned how students are monitoring marine life in that village.

An in-depth hands-on training session for the Youth Area Watch is scheduled for Feb. 14-19 in Kodiak.

Brian Himelbloom, UAF teacher, recommended that students begin monitoring waters in March.

Himelbloom also said that "it's key to have monitoring in the summer." Currently there are four monitoring sites: Larsen Bay, Kodiak, Ouzinkie and Old Harbor. Akhiok may also become a site for the program.

Schneider says the area watch program "combines scientific expertise with traditional knowledge found locally. It provides another opportunity for kids to learn 'hands-on' and see if this is meaningful to their communities. It's a great way to invite communities to get involved in projects and give direction

"We're always looking for 'hooks' for kids to stay in school. When learning is meaningful and relative to their lives, that hook tends to be a little sharper."

Kate Wynne, a marine mammals specialist and UAF professor, saw the Area Watch launched in Prince William Sound and she's excited about it.

"Everybody is talking about incorporating traditional knowledge with Western science. This gets the kids involved (with a) 'hands-on' application of science."

Traditional knowledge also comes into play in the rural science fairs which is a blending of science, Alutiiq history and language, with specific emphasis on local relevance and respect for elders.

The program is sponsored by the American Indian Science and Engineering Society, a professional organization seeking to get Native American students more involved in math, science and technology. Science projects are evaluated according to their alignment with the scientific method and cultural relevancy.

In November a regional science fair was held in Ouzinkie and winners participated in the statewide fair in Anchorage last weekend. Schneider says local students did very well in the competition.

Three of the four top project winners in the regional fair got started at the Academy of Elders on Afognak Island last summer.

Projects included a study of Alaska Native languages, a test to see which burns better — seal or fish oil — construction of deadfall traps, and an examination of different ways of preparing fish.

Students' projects were displayed in the Sheraton Hotel during the Native Educators' conference.

Top strategists

The Area Watch planning team met at the Fishery Industrial Technology Center to map out research strategies. From left, Teri Schneider, Alutiiq studies coordinator; Marc Leinberger, Ouzinkie teacher; Ralph Joe, Ouzinkie student; Shelly Johnson, Ouzinkie student; Kate Wynne, UAF teacher, Brian Himelbloom, UAF teacher; Darian Rastopsoff, Larsen Bay student; Alice Charliaga, Larsen Bay student, Teresa Hedges, Larsen Bay teacher; Kaleb Garza, Area Wide School student; David Allen, Area Wide School instructor; Matt White, Area Wide School student; Mitchell Simeonoff, Native Harbor Seal Commission, Akhiok; Roy Rastopsoff, Akhiok student; and Julie Matweyou, UAF graduate student. (Mike Rostad photos)

A young crop of scientists

Island science fair winners and chaperones gather to depart for Anchorage. From left, Kalen Pedersen, Patrick Schneider, Marc Leinberger, chaperone; Matthew Delgado, Ivan Christiansen, Cadman Peterson, Rocky Christiansen Jr., Jon Panamarioff, Scott Detorres, Teri Schneider, Alutiiq studies coordinator; Juanita Kelly, chaperone; Geremy Clarion and Bliss Peterson.

KODIAK DAILY MIRROR January 31, 2000

Scientists see shrimp comeback with Gulf cooling

ANCHORAGE (AP) — A pair of federal scientists say the oceans are beginning to cool, and that could mean shrimp will be making a comeback in the Gulf of Alaska after a 20-year decline.

The scientists said they've spotted a shifting ocean temperature pattern that's triggering a change in the composition of fish and wildlife in the Gulf. That change could shake up the commercial fishing industry by throwing salmon and pollock into decline and affect the health and abundance of seabirds and marine mammals, they said.

Paul Anderson, a biologist with the National Marine Fisheries Service's Kodiak lab, said some declines already have been seen in the exploitable biomass of pollock.

"We have already seen declines in the exploitable biomass of pollock, a modest decline in cod and a slight decline in nearshore flatfish, like arrowtooth," said Paul Anderson, a biologist with the National Marine Fisheries Service's Kodiak lab.

Those will be replaced by shrimp and capelin — a fatty forage fish attractive to seabirds and marine mammals, he said.

The Gulf of Alaska is cooling.

For the past 20 years, the winter water temperature has hovered around 4- to 5 degrees Celsius, 39- to 41 degrees Fahrenheit. Over the next 20 years, it will drop to 0- to 2 degrees Celsius, 32- to 36 degrees Fahrenheit, before rising again.

Mediation underway over Steller sea lion issue

By SUE JEFFREY
Mirror Writer

The National Marine Fisheries Service, the federal agency that manages Alaska's $1 billion pollock and Atka mackerel fisheries, and Greenpeace, the environmental group suing the agency for not doing enough to protect the endangered Steller's sea lion, are in mediation this week following a federal court opinion also critical of NMFS.

U.S. District Judge Thomas Zilly last week ruled NMFS has failed to determine whether commercial fishing is hampering the Steller's sea lion and will be in violation of the law unless it finds the source of the problem.

In an official statement following the ruling, NMFS said the agency is currently reviewing the order and also is involved in a mediation process with the plaintiffs (Greenpeace) and the fishing industry.

But Alaska Draggers Association director Al Burch doesn't have much faith in the process, saying, "It's a meaningless exercise."

"Greenpeace is not going to give up anything," Burch said. "They're going to keep going for the jugular — shutting down more and more of the fisheries. They'll never be satisfied.

"At the December (North Pa- Fishery Management) counceeting they said their ultimate goal is to shut down all trawling.

"Industry is giving up everything," Burch added, referring to NMFS closing fishing grounds around sea lion habitats.

Specifically, commercial fishing has been out-lawed within 20 nautical miles of sea lion rookeries and haul-outs in the Bering Sea and 10 nautical miles in the Gulf of Alaska, according to Alaska Groundfish Data Bank director Chris Blackburn.

Despite a reduction in commercial fishing, the Steller's sea lion populations in southcentral and western Alaska continue to decline, dropping from an estimated 230,000 animals in 1965 to 34,000 today. NMFS said it would re-evaluate how the commercial groundfish harvests are affecting the sea lion when the species was listed as endangered in 1997.

When Greenpeace filed the lawsuit against NMFS in 1998, the agency said it would take a broader look at all federally managed fisheries in Alaska. The court issued a stay based on that promise.

When NMFS published its report nine months later, the court found it fell short in determining the impact of the pollock fishery.

Burch thinks the reports are "meaningless" and says he agrees with Judge Zilly when he ruled against NMFS.

"One small department in NMFS closed down the (pollock) areas based on suspect, non-reviewed data, not on good scientific evidence," Burch said.

"We don't know why they (sea lions) are declining.

"At that high number, (230,000 in 1965), you'll see there is no commercial cod and no pollock fisheries in the state of Alaska," Burch said.

"We were fishing crab and shrimp in those days. The sea lions follow the same curves as crab and shrimp. The reverse is true for the pollock and cod.

"It's the natural fluctuations of the ecosystem. We want a definitive answer based on good scientific data, not smoke the data to make it work," he said.

In his order last week, Zilly said NMFS "entirely ignored relevant factors and admittedly failed to analyze and develop projections based on information that was available.

"Having failed to live up to its obligations under the law, NMFS once again invites the court to withold judicial review while it undertakes to do what should have been done long ago. The court declines the invitiation," Zilly wrote.

Burch said this morning he doesn't know what Zilly's ruling will entail.

"I think it was a reduction in quotas and closing additional areas. We're waiting for the other shoe to drop," he said.

ANCHORAGE DAILY NEWS January 28, 2000

Steller report faulted

Judge tells agency to do its job right

By NATALIE PHILLIPS
Daily News reporter

Go do your job and do it right this time, a federal judge said this week in ordering the National Marine Fisheries Service to sort out whether commercial fish trawling is hurting the endangered Steller sea lion in the North Pacific.

Until the agency does that, it is in violation of federal law, U.S. District Judge Thomas Zilly of Seattle wrote in a long opinion elaborating on his one-page order from last week.

The NMFS had prepared a report evaluating how the fishing affects the sea lions. But Zilly found that review "limited in scope, heavy on general background information and deficient in focused and meaningful discussion and analysis."

The review is "not the broad and in-depth consultation" required under the Endangered Species Act, wrote the judge, who has been dealing for two years with a lawsuit that environmental groups filed against the federal agency in charge of managing North Pacific fisheries.

The agency "entirely ignored relevant factors and admittedly failed to analyze and develop projections based on information that was available," he wrote.

Zi ued a one-page order last week saying tl ency's action fell short of what was

STELLER: Judge chides agency report

Continued from Page D-1

required by law. He promised then to elaborate with a longer order, which was issued Wednesday.

It is a victory for the environmental groups that sued, claiming the NMFS has failed to take steps to assess whether the commercial fishing industry might be hampering the recovery of the sea lion.

The environmental groups' attorney, Peter Van Tuyn with Trustees for Alaska, said Thursday the agency "should have been looking at this issue with a wide-angle lens for the past decade. This is something that has been going on for a long time."

The order came just two days before NMFS officials and attorneys representing environmental groups began two days of ı ıtion talks in Seattle.

When Zilly's order came out last week, attorney Jonathan Pollard of the NMFS said he couldn't comment without seeing the judge's full ruling. Pollard was in Seattle on Thursday and could not be reached for comment.

At the heart of the dispute is the future of the state's most lucrative commercial fisheries, estimated at $1 billion, and the future of the endangered Steller sea lion, whose numbers have dropped from an estimated 230,000 in 1965 to 34,000 today. Federal law required that when the sea lion was listed as an endangered species in 1997, the fisheries service would re-evaluate how the commercial groundfish harvests affect the sea lion and its critical habitat.

When the suit was filed, the agency said it planned to take a broader look at all federally managed fisheries in the Gulf of Alaska, Bering Sea and Aleutian Islands. Because of that promise, the court issued a stay.

Nine months later, the agency produced the new review. The court concluded last summer that one fell short, in terms of the impact of the pollock fishery. The latest order found essentially the same for the agency's examination for all groundfish fisheries.

The agency had asked for the opportunity to rewrite the report. Zilly, in his opinion Wednesday, replied: "Having failed to live up to its obligations under the law, NMFS once again invites the court to withhold judicial review while it undertakes to do what should have been done long ago. The court declines the invitation

ANCHORGE DAILY NEWS

January 28, 2000

Aquarium will cut pay, jobs

The Associated Press

SEWARD — The Alaska SeaLife Center plans layoffs and pay cuts to bring its budget under control.

Executive director Mark Lloyd said the center will lay off at least three people and others will take at least temporary pay cuts.

"The cuts have started at the top," he said. "I voluntarily took a $20,000 cut myself to make sure we don't affect the people who are really important in day-to-day operations."

The center has laid off its facilities director, its ticketing and reservations manager and an avian curator.

"This had nothing to do with them being bad employees," Lloyd said. "They may have been less critical to the operation, but they were not fired for inappropriate behavior."

He said the center employs about 75 people during peak operations and has about 55 employees now. It opened in 1998 with help from a $17.5 million loan from the city of Seward and has suffered big financial losses.

The center lost $2.7 million in 1999, according to Don Grimes, the city's financial adviser.

In December, the center won approval for a $5.5 million federal grant and has sought a $3 million emergency loan until that money becomes available. The city's financial adviser suggested that the center begin changing its operational structure.

Lloyd said the center loses business during winter and generally cuts staffing by 30 percent. It is also trying to grow from a start-up business to an established one, he said.