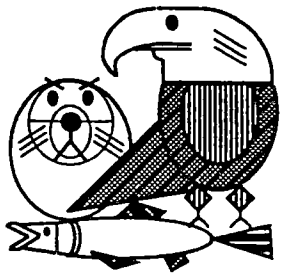
13.08.01 Nov 96

13.08.01 – Reading File

November 1996

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

TO: Ross Toole/Applied Microsystems, Inc.

FROM: Eric F. Myers, Director of Operations

DATE: November 27, 1996

SUBJ: Contract IHP-97-007 — Authorization to Continue Work

The purpose of this memorandum is to formally acknowledge the completion of Task 1 - System Evaluation and Server Design Recommendation and to authorize continued work on the web server project.

The ADFG contract with Applied Microsystems (IHP-97-007) in Appendix D provides: "No work beyond completion of Task 1 shall be undertaken without the written consent of the Project Director." As you know, you have previously provided me with a written recommendation regarding the most appropriate server design/configuration and we have ordered certain hardware and software needed to continue with the project.

The hardware and software needed for the web server should be on hand next week and that will enable you to proceed with the remaining work under the contract (i.e., hardware installation, software installation, and trouble shooting).

cc: Debbie Boyd/ADFG

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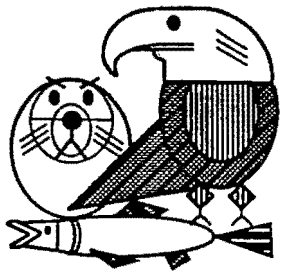

November 26, 1996

Buddy Goatcher
Kodiak Coastal Unit Office
202 Center Avenue, #201
Kodiak, AK 99615

Dear Buddy:

I understand from Stan Senner and Bud Rice that you requested information on the Trustee Council's quarterly and annual reporting requirements.

Quarterly reports. At the end of each quarter (Dec. 31, Mar. 31, June 30, Sept. 30) I send "project status update forms" for all of DOI's projects to DOI's EVOS liaison, Catherine Berg. Catherine is responsible for returning the completed forms to me by a specified date (usually three weeks after the end of the quarter). As an example, I have attached the completed update form for your project for the quarter ending September 30. You'll see that the schedule of measurable tasks from your DPD is preprinted on the form. Updating the form consists of indicating whether or not the tasks have been completed according to schedule. Regarding the December quarterly report (which will cover the first quarter of work on FY 97 projects), you should contact Catherine Berg or work through the NPS project manager, Bud Rice.

Annual reports. An annual report is due April 15, 1997 on each FY 96 project that also received funding for FY 97 (which your project did). A copy of the procedures for preparing annual reports is attached.

Please feel free to give me a call if you have questions about any of this.

Sincerely,

Sandra Schubert

Sandra Schubert
Project Coordinator

Attachments

cc: Catherine Berg, DOI/USFWS (w/out attachments)
Bud Rice, DOI/NPS (w/out attachments)

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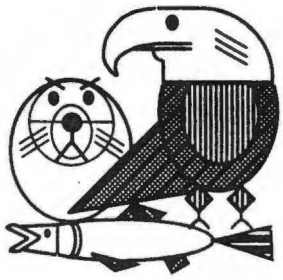


MEMORANDUM

TO: Claudia Slater, Alaska Department of Fish and Game
Carol Fries, Alaska Department of Natural Resources
Dave Gibbons, U.S. Forest Service
Glenn Elison, U.S. Fish and Wildlife Service

FROM: Molly McCammon, Executive Director

DATE: November 26, 1996

SUBJ: Small Parcel Program — Kenai River Planning

As you know, I have spoken informally with various Trustee agencies regarding the future of the habitat protection efforts on the Kenai River. The purpose of this memo is ask for your assistance to establish a small working group to continue these preliminary discussions in order to identify options for the Trustee Council's further consideration regarding the long-term future of the small parcel program as it pertains to the Kenai River.

I would like to try and convene an initial work session during the second week in December. This initial meeting would provide an opportunity for agencies to share their respective interests and goals concerning the Kenai River and to brainstorm some option concepts. For your reference, I have enclosed a copy of a memo that Janet Kowalski/ADFG Habitat Division prepared at my request. It provides some good background information and can serve as a starting point for further discussion.

I would appreciate it if each of you could consult as appropriate with your respective Trustee members and identify the individuals who can represent your agency on the working group. I have asked Eric Myers to follow up with each of you and he will call in the near future to identify a specific meeting time and location. Your assistance is appreciated.

enclosure (w/o map)

cc: Catherine Berg
Byron Morris

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

DEPARTMENT OF FISH AND GAME

Habitat and Restoration Division

P.O. Box 25526
Juneau, AK 99802-5526
PHONE: (907) 465-4105
FAX: (907) 465-4759

MEMORANDUM

TO: Molly McCammon, Executive Director
Exxon Valdez Oil Spill Restoration Office

FROM: Janet Kowalski, Director
Habitat and Restoration Division
Department of Fish and Game

DATE: November 1, 1996

SUBJECT: Kenai River Small Parcel Acquisition Strategy

Thank you for your interest in the Alaska Department of Fish and Game's (ADF&G) approach to Kenai River small parcel acquisitions. As you know, the department strongly supports the Exxon Valdez Oil Spill (EVOS) Small Parcel Habitat Protection Program. We believe the Small Parcel program provides a significant opportunity for conservation and long-term protection of key fish and wildlife habitats, not only on the Kenai River, but throughout the oil spill-affected region. Because the Kenai River contains exceptional resource and economic values, and because it receives such high levels of public use, the department has promoted an aggressive approach to acquisition. We are unaware of any other location in the spill area where development threats and user group conflicts can be said to be so acute. The Kenai River is road accessible to over 70 percent of the state's population and accounts for approximately 19 percent of the total statewide sport fishing effort. Sport and commercial fishery harvests associated with the Kenai River provide as much as $78 million annually to the state's economy. To underscore the department's commitment to protecting Kenai River habitat, we have developed a complimentary acquisition program using SB-183 funds to purchase additional parcels that did not qualify for Trustee Council action.

The principal goal of the department's strategy for the Kenai River has been to acquire as much streambank and riparian habitat as possible and have it placed in protective status. As a practical matter, this means priority has been given to: 1) Large parcels of land (generally 1/8 mile of streambank or greater) that have well-vegetated streambanks and other high-quality riparian habitats; 2) Multiple parcels that can be consolidated and acquired as a block; 3) Undeveloped rather than developed parcels (to avoid inflated acquisition costs and potential hazmat, environmental, or management problems); 4) Parcels of any size that have some strategic value for

managing or preventing additional damage to the river, or that enhance previous acquisitions (determined on a case-by-case basis); and 5) Parcels that are generally unencumbered by landowner covenants (such as limited-development easements, access restrictions, etc.).

The attached map portrays private parcels that may qualify for ADF&G support assuming the landowners are willing sellers. There are undoubtedly other parcels that are not depicted that may also qualify based upon some strategic restoration or management value (for example, we know harlequin ducks nest somewhere in the river's watershed but have not identified specific nest sites). Therefore, the map should be used as a general guide for the more obvious acquisition priorities but should not imply that these are the **only** parcels with significance to EVOS restoration.

Furthermore, the department supports a watershed approach to habitat protection. Private parcels that contain important riparian habitats should qualify for protection, even if they do not have water frontage. Important habitats, both on and off the river, include contiguous wetlands, sloughs, natural springs, and certain soil and vegetation types. Tributaries to the Kenai River should be protected. Focusing on the river's mainstem would be a short-sighted policy, at variance with what we know is an important functional relationship between watershed protection and fish and wildlife production.

Additional consideration should be given to correcting two situations that typify the worst forms of development on the Kenai River: Castaway Cove and Dow Island. In each case, waterfront parcels have been subdivided to create rows of small, constricted lots that experience periodic flooding and erosion. The lots are intended to promote seasonal use but, due to their size and location, cannot be permitted to allow water and septic system improvements. Nevertheless, permanent structures have been constructed causing a loss of fish habitat and creating management problems as landowners attempt to harden their streambanks and protect their property. At this time, many lots are undeveloped; acquisition could prevent a bad situation from becoming worse.

Finally, we have included City of Kenai lands since the City has indicated a willingness to sell a large portion of the Kenai River Flats, a vast estuarine wetland complex that supports exceptional fish and wildlife values.

Based on these factors, we have prepared the attached map of Kenai River parcels identifying the following categories:

1. All private parcels with 1/8 mile streambank or greater (660 ft.)

2. All private parcels with a single landowner, in contiguous blocks along the river, totaling 1/8 mile or greater.

3. All planned EVOS parcel acquisitions.

4. All City of Kenai parcels that are part of the Kenai River Flats.

5. Castaway Cove and Dow Island subdivisions.

6. Other private parcels.

7. Public lands.

As noted previously, any private parcel on the river may be found to have some strategic quality that is either unknown or inadequately mapped at this time. The department reserves the right to bring these special parcels before the Trustee Council on a case-by-case basis.

The attached cost estimates for acquiring the identified parcels are based on Kenai Borough 1995 tax assessment records. Actual appraised values may vary significantly. The total dollar amount reflects an assumption that all identified parcels can be purchased. In fact, only a small subset may be offered for sale. One option that will maximize the benefit from limited acquisition funds is to consider purchasing conservation easements. In our experience, many landowners are interested in protecting their property but would like to retain ownership so they may continue to use and enjoy the river. In all cases, conservation easements should require that the landowner be responsible for maintaining and protecting the values for which the easement is established.

In closing, I would like to reiterate that the ADF&G, while committed to Kenai River restoration, supports a small parcel program that acquires key fish and wildlife habitats throughout the oil spill area. The department has sponsored parcels on the Valdez Duck Flats; and on the Karluk, Kasilof, Ninilchik, and Ayakulik rivers. These acquisitions, along with those on the Kenai River, are critical to successful management and protection of the state's fish and wildlife populations and harvests. We hope this process can continue and that you will support establishing a Habitat Protection endowment, similar in function to the Restoration Reserve account that now exists for research and restoration projects.

Attachments

cc: Frank Rue
Lance Trasky
Claudia Slater
Don McKay
Gary Liepitz
Gay Muhlberg
Mark Kuwada

City Of Kenai Parcels, Kenai River Flats

TAXID	OWNER	LAND VALUE	IMPROVEMENT	ACRES
04705506	KENAI CITY OF	100.00000	0.00000	8.50
04705701	KENAI CITY OF	100.00000	0.00000	2.89
04705806	KENAI CITY OF	100.00000	0.00000	4.13
04708301	KENAI CITY OF	100.00000	0.00000	0.38
04708406	KENAI CITY OF	0.00000	0.00000	0.16
04708503	KENAI CITY OF	200.00000	0.00000	0.18
04708504	KENAI CITY OF	200.00000	0.00000	0.48
04708612	KENAI CITY OF	0.00000	0.00000	1.33
04709302	KENAI CITY OF	0.00000	0.00000	0.32
04709305	KENAI CITY OF	0.00000	0.00000	0.19
04710301	KENAI CITY OF	100.00000	0.00000	0.69
04901121	KENAI CITY OF	15,800.00000	0.00000	4.36
04901130	KENAI CITY OF	46,000.00000	0.00000	3.17
04901132	KENAI CITY OF	26,000.00000	574,000.00000	1.98
04901404	KENAI CITY OF	35,000.00000	0.00000	2.91
04910014	KENAI CITY OF	8,000.00000	0.00000	616.90
04910051	KENAI CITY OF	100.00000	0.00000	338.38
04910107	KENAI CITY OF	13,400.00000	0.00000	13.99
04911008	KENAI CITY OF	4,000.00000	0.00000	45.67
04911009	KENAI CITY OF	20,000.00000	0.00000	345.07
04911010	KENAI CITY OF	2,000.00000	0.00000	11.63
04911011	KENAI CITY OF	44,000.00000	0.00000	621.04
04911012	KENAI CITY OF	4,000.00000	0.00000	14.63
04911013	KENAI CITY OF	10,000.00000	0.00000	61.36
04911014	KENAI CITY OF	2,000.00000	0.00000	2.04
04911015	KENAI CITY OF	12,000.00000	0.00000	93.15
04912029	KENAI CITY OF	83,300.00000	0.00000	2.27
04945002	KENAI CITY OF	100.00000	0.00000	12.06
04945003	KENAI CITY OF	28,300.00000	0.00000	4.82

TAXID	LANDOWNER	LAND VALUE	IMPROVEMENT	ACRES
04945004	KENAI CITY OF	62,600.00000	0.00000	17.89
04945005	KENAI CITY OF	100.00000	0.00000	45.85
TOTAL----------		**$417,600.00**	**$574,000.00**	**2,278.42**

Private Parcels With\1/8 Mile Waterfront Or More

TAXID	OWNER	LAND VALUE	IMPROVEMENT	ACRES
04705702	PACIFIC STAR SEAFOODS INC	44,400.00000	0.00000	4.63
04711901	JOHNSON J E & LANCET A	3,000.00000	0.00000	4.38
04901124	KENAI CITY OF	21,100.00000	0.00000	1.40
04904088	COOK INLET REGION INC	13,700.00000	0.00000	76.00
04906007	POORE HERRICK A & VIRGINIA	386,500.00000	63,600.00000	54.55
04906014	PETEROFF GEORGE	330,000.00000	0.00000	33.00
04910103	C W C FISHERIES	45,900.00000	0.00000	6.38
04910106	KENAI CITY OF	176,600.00000	1,120,900.00000	12.12
04912020	LOFSTEDT VERNON L	115,600.00000	0.00000	10.04
04912027	CONE CHESTER H & CONE MAVIS	106,200.00000	82,000.00000	4.47
04912042	BREEDEN LORETTA	69,200.00000	108,700.00000	32.10
04931010	HEUS CLIFFORD ETAL	29,200.00000	0.00000	16.23
04937010	OBERTS LEO T & MARION A	787,600.00000	0.00000	113.37
04939038	SIMPSON DAVID & MARGARET	14,200.00000	0.00000	25.00
05501117	RIVERWOOD SUBDIVISON HOME	6,300.00000	0.00000	4.20
05503203	JANDA CHARLES J	111,600.00000	0.00000	44.64
05503224	COOK INLET REGION INC	160,000.00000	0.00000	35.01
05525025	CHO KYU JIN & SUN SHIK	208,200.00000	334,100.00000	47.80
05525026	TALL TIMBERS INVESTMENTS GR	206,200.00000	28,200.00000	47.75
05525028	DAVIDHIZAR LAVERN & KATHRYN	213,500.00000	3,000.00000	16.58
05525029	SALTZ CLYDE	32,000.00000	3,000.00000	1.85
05537001	CORR TOMMY REED & TOMMYE JO	189,300.00000	0.00000	36.40
05537017	GRUBBA ALBERT J & DOLORES M	140,000.00000	0.00000	20.00
05542108	CIECHANSKI EDWARD L & MAE F	204,300.00000	42,300.00000	52.53
05542112	PHILLIPS GRANT TRUSTEE ETAL	113,100.00000	104,700.00000	20.00
05555012	CORR TOMMY REED & TOMMYE JO	296,900.00000	78,200.00000	133.97
05561001	KNACKSTEDT HENRY H	98,700.00000	0.00000	15.90
05561002	BREEDEN LORETTA	108,000.00000	0.00000	26.00
05704258	SPRATT VICTOR M & PATSY V	15,400.00000	0.00000	1.49

TAXID	LANDOWNER	LANDVALUE	IMPROVEMENTS	ACRES
05704261	LABER ROGER C & MAGNEA S	15,400.00000	0.00000	1.49
05704264	BUSHON SAMUEL D ETAL	91,600.00000	0.00000	6.95
05764001	COOK INLET REGION INC	404,500.00000	0.00000	40.45
05764003	MUNDELL EARL C & ALICE E	188,400.00000	173,300.00000	18.17
05767001	BAUGHMAN ERROL G & SHIRLEE	327,000.00000	78,600.00000	28.70
05768010	STEWART NIKISHKA LEA	141,000.00000	50,500.00000	5.64
05768011	STEWART NIKISHKA LEA	117,600.00000	0.00000	60.28
05935001	RYHERD INVESTMENTS LTD	147,900.00000	1,400.00000	9.86
06026003	HINKLE GARY C & JUDITH A	961,000.00000	71,200.00000	8.50
06034007	KPM LIMITED PRTNRSHP ETAL	265,000.00000	0.00000	55.91
06314183	HUSKE MARVIN W ETAL	234,900.00000	0.00000	114.70
06318038	THOMAS DAVID J	131,500.00000	43,000.00000	62.13
06318079	COOK INLET REGION INC	419,800.00000	0.00000	361.87
06318086	FAIR CALVIN M & M J	181,900.00000	38,600.00000	157.02
06501201	PEDERSEN'S RESORT INC	258,600.00000	126,200.00000	25.21
06508102	RITCH NELSON RUDOLPH	66,400.00000	10,600.00000	5.63
06514005	MCDOWELL SAM E & A JOYCE	83,000.00000	103,500.00000	6.45
06514011	RUSS JOHN	25,500.00000	4,400.00000	1.18
06514012	COOK INLET REGION INC	38,200.00000	0.00000	2.91
06514030	BURGESS ERLESS & ROSE	25,500.00000	18,000.00000	1.48
06515007	COOK INLET REGION INC	39,000.00000	0.00000	4.98
06515008	COOK INLET REGION INC	49,700.00000	0.00000	10.52
06516079	COOK INLET REGION INC	25,000.00000	0.00000	2.69
06516080	COOK INLET REGION INC	28,800.00000	0.00000	4.11
06516082	COOK INLET REGION INC	192,300.00000	0.00000	28.28
06518051	COOK INLET REGION INC	23,800.00000	0.00000	2.55
06518052	COOK INLET REGION INC	36,200.00000	0.00000	8.77
06518101	COOK INLET REGION INC	52,100.00000	0.00000	7.26
06533001	MUMBY ROBERT J & CAROLYN J	21,200.00000	30,900.00000	0.48
06533030	SCHIKORA FRED J & MARY ANN	10,200.00000	0.00000	0.87
06601117	BIRD ELMER R & PATSY J	28,000.00000	0.00000	1.58

TAXID	LANDOWNER	LANDVALUE	IMPROVEMENTS	ACRES
06606007	BASKIN	28,000.00000	3,800.00000	1.66
06606008	GARAFOLA	28,000.00000	6,800.00000	0.83
06606112	THOMPSON ALMIN G & ELLEN J	66,500.00000	76,200.00000	4.65
06610001	EMERTON STEPHEN W ETAL	62,000.00000	9,200.00000	5.14
06610002	RILL LYNN W & EVELYN	64,000.00000	0.00000	8.55
06610005	HWANG SUN JIN & HWANG SUNG	138,000.00000	0.00000	46.00
06611007	COOK INLET REGION INC	0.00000	0.00000	2.54
06611307	COOK INLET REGION INC	322,800.00000	0.00000	570.00
06612022	BUDD THOMAS W & GEORGETTE L	60,000.00000	0.00000	6.83
06612034	COOK INLET REGION INC	112,200.00000	0.00000	58.52
06612101	COOK INLET REGION INC	265,600.00000	0.00000	246.04
06614003	BONDURANT DALE E	55,100.00000	52,500.00000	3.01
06615001	COOK INLET REGION INC	257,700.00000	0.00000	205.89
06626002	WHITISH MAXINE O	131,900.00000	8,400.00000	22.91
06634002	PLAGGE FRANZ A ETAL	80,000.00000	0.00000	10.03
06638021	COOK INLET REGION INC	90,000.00000	0.00000	11.31
11910006	CURTIS EDGAR J & PATRICIA C	56,100.00000	3,700.00000	1.79
11931016	ALASKA HOTEL PROPERTIES INC	340,700.00000	2,733,300.00000	42.23
13501211	SALAMATOF NATIVE ASSOC INC	141,800.00000	0.00000	35.84
13524301	FIORE JOSEPH A	75,600.00000	0.00000	7.19
13524303	MISHAKOFF NIKATHA	231,300.00000	0.00000	35.17
13524305	PATSON ELLEN L	362,000.00000	2,000.00000	77.17
13526020	SALAMATOF NATIVE ASSOC INC	102,000.00000	4,100.00000	18.69
13526112	SALAMATOF NATIVE ASSOC INC	28,400.00000	0.00000	6.50
13526204	SALAMATOF NATIVE ASSOC INC	75,000.00000	0.00000	10.30
13526401	SALAMATOF NATIVE ASSOC INC	674,400.00000	0.00000	44.96
TOTAL----------		**$12,726,800.00**	**$5,618,900.00**	**3,428.16**

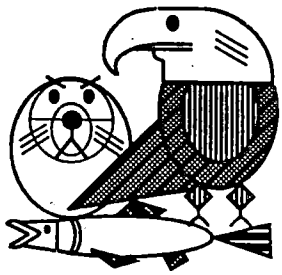
Single Owner Contiguous Parcels With 1/8 Mile Waterfront Or More

TAXID	OWNER	IMPROVEMENT	LAND VALUE	ACRES
04912026	CONE CHESTER H & MAVIS D	0.00000	194,500.00000	18.67
04912034	CONE CHESTER H & MAVIS D	20,000.00000	68,400.00000	2.14
05766024	LANCASHIRE LAWRENCE H &	0.00000	25,000.00000	2.43
05766025	LANCASHIRE LAWRENCE H &	0.00000	25,000.00000	0.96
05766026	LANCASHIRE LAWRENCE H &	0.00000	25,000.00000	0.98
05766027	LANCASHIRE LAWRENCE H &	0.00000	25,000.00000	1.03
05766028	LANCASHIRE LAWRENCE H &	0.00000	30,000.00000	1.02
05766029	LANCASHIRE LAWRENCE H &	0.00000	35,000.00000	1.02
05766030	LANCASHIRE LAWRENCE H &	0.00000	35,000.00000	1.01
05766031	LANCASHIRE LAWRENCE H &	0.00000	35,000.00000	0.98
06046004	STENGA HERMAN & JANET L	0.00000	49,000.00000	1.32
06046005	STENGA HERMAN & JANET L	0.00000	49,000.00000	1.21
06046006	STENGA HERMAN & JANET L	0.00000	49,000.00000	1.04
06046007	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.87
06046008	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.81
06046009	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.76
06046010	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.74
06046011	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.63
06046012	STENGA HERMAN & JANET L	77,700.00000	55,500.00000	0.60
06046013	STENGA HERMAN & JANET L	0.00000	49,000.00000	0.79
06508227	SAMSEL GAYLORD K & JOAN	1,500.00000	46,500.00000	1.42
06508228	SAMSEL GAYLORD K & JOAN	35,600.00000	49,500.00000	1.28
06508229	SAMSEL GAYLORD K & JOAN	0.00000	42,000.00000	1.33
06508230	SAMSEL GAYLORD K & JOAN	0.00000	42,000.00000	1.24
06508231	SAMSEL GAYLORD K & JOAN	22,400.00000	47,000.00000	1.25
06514031	SCHAFF ANTHONY M	6,000.00000	23,800.00000	0.93
06514032	SCHAFF ANTHONY M	5,800.00000	23,800.00000	1.05
06518111	COOK INLET REGION INC	0.00000	56,900.00000	4.00
06518112	COOK INLET REGION INC	0.00000	37,400.00000	5.00

TAXID	OWNER	IMPROVEMENT	LAND VALUE	ACRES
06612102	MUSCHANY CHARLES M TRST	5,900.00000	40,000.00000	4.97
06612103	MUSCHANY CHARLES M TRST	0.00000	34,000.00000	2.18
06612104	MUSCHANY CHARLES M TRST	500.00000	38,000.00000	3.10
06612115	WELLENSTEIN FAMILY TRUST	0.00000	24,000.00000	0.92
06612116	WELLENSTEIN FAMILY TRUST	0.00000	24,000.00000	0.92
06612117	WELLENSTEIN FAMILY TRUST	0.00000	24,000.00000	0.92
06612118	WELLENSTEIN FAMILY TRUST	0.00000	24,000.00000	0.92
06612119	WELLENSTEIN FAMILY TRUST	1,900.00000	24,000.00000	1.28
06638002	COOK INLET REGION INC	0.00000	30,000.00000	3.23
06638003	COOK INLET REGION INC	0.00000	32,000.00000	3.87
06638004	COOK INLET REGION INC	0.00000	32,000.00000	3.79
06638005	COOK INLET REGION INC	0.00000	34,000.00000	4.03
06638006	COOK INLET REGION INC	0.00000	32,000.00000	3.69
06638007	COOK INLET REGION INC	0.00000	30,000.00000	3.29
06638008	COOK INLET REGION INC	0.00000	30,000.00000	2.96
06638009	COOK INLET REGION INC	0.00000	30,000.00000	2.88
06638010	COOK INLET REGION INC	0.00000	30,000.00000	2.76
06638011	COOK INLET REGION INC	0.00000	30,000.00000	2.66
06638012	COOK INLET REGION INC	0.00000	30,000.00000	2.61
06638013	COOK INLET REGION INC	0.00000	30,000.00000	2.67
06638014	COOK INLET REGION INC	0.00000	30,000.00000	2.76
06638015	COOK INLET REGION INC	0.00000	30,000.00000	2.72
06638016	COOK INLET REGION INC	0.00000	28,000.00000	2.59
06638017	COOK INLET REGION INC	0.00000	30,000.00000	2.61
06638018	COOK INLET REGION INC	0.00000	30,000.00000	2.83
06638019	COOK INLET REGION INC	0.00000	32,000.00000	3.38
06638020	COOK INLET REGION INC	0.00000	32,000.00000	3.59
06638022	WELLENSTEIN FAMILY TRUST	0.00000	25,000.00000	1.97
13525202	SALAMATOF NATIVE ASSOC INC	0.00000	48,000.00000	1.07
13525203	SALAMATOF NATIVE ASSOC INC	0.00000	48,000.00000	0.92
13525204	SALAMATOF NATIVE ASSOC INC	115,300.00000	51,000.00000	0.94

TAXID	LANDOWNER	IMPROVEMENT	LANDVALUE	ACRES
13525205	SALAMATOF NATIVE ASSOC INC	0.00000	51,500.00000	0.94
13525306	SALAMATOF NATIVE ASSOC INC	0.00000	49,000.00000	0.97
13525307	SALAMATOF NATIVE ASSOC INC	0.00000	48,000.00000	0.97
13525308	SALAMATOF NATIVE ASSOC INC	20,700.00000	54,500.00000	0.99
13525309	SALAMATOF NATIVE ASSOC INC	0.00000	48,000.00000	0.95
13525310	SALAMATOF NATIVE ASSOC INC	4,800.00000	49,000.00000	0.94
13525311	SALAMATOF NATIVE ASSOC INC	0.00000	48,000.00000	0.93
13525329	SALAMATOF NATIVE ASSOC INC	0.00000	51,500.00000	1.00
13526002	SALAMATOF NATIVE ASSOC INC	193,600.00000	42,500.00000	1.21
13526003	SALAMATOF NATIVE ASSOC INC	0.00000	36,000.00000	1.07
13526103	SALAMATOF NATIVE ASSOC INC	0.00000	36,000.00000	0.92
13526105	SALAMATOF NATIVE ASSOC INC	0.00000	36,000.00000	1.14
13526106	SALAMATOF NATIVE ASSOC INC	0.00000	36,000.00000	1.24
13526107	SALAMATOF NATIVE ASSOC INC	0.00000	36,400.00000	1.47
13526108	SALAMATOF NATIVE ASSOC INC	0.00000	36,600.00000	1.72
13526109	SALAMATOF NATIVE ASSOC INC	0.00000	36,800.00000	1.84
13526110	SALAMATOF NATIVE ASSOC INC	0.00000	36,600.00000	1.68
13526201	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	1.31
13526202	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	2.09
13526203	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	2.51
13526305	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	0.99
13526306	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	1.11
13526307	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	0.98
13526308	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	0.93
13526309	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	1.20
13526310	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	1.24
13526311	SALAMATOF NATIVE ASSOC INC	0.00000	50,000.00000	1.25
13526312	SALAMATOF NATIVE ASSOC INC	0.00000	46,000.00000	1.08
TOTAL----------		**$511,700.00**	**$3,627,700.00**	**170.21**

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

To: EVOS Project Leaders and Principal Investigators

From: Molly McCammon, Executive Director

Date: November 26, 1996

Subject: 1997 Restoration Workshop

This is a second reminder and call for abstracts for the 1997 Restoration Workshop, which will be held January 23-25, 1997 at the Hotel Captain Cook in Anchorage. All project leaders and principal investigators are expected to participate.

Abstracts, Posters, and Computer Displays
Abstracts are starting to come in to the Restoration Office. **Please remember that a one-page abstract for each project funded in FY 1996 should be submitted to Stan Senner no later than Monday, December 16** (stans@oilspill.state.ak.us). Another copy of the abstract guidelines is attached for your information.

The poster session was very popular at last January's workshop, and we invite and encourage everyone who is not giving an oral presentation to prepare a poster for the 1997 workshop. **Bill Hauser at the Alaska Department of Fish and Game is chair of the poster session**; you should contact him if you have questions that are not addressed in the enclosed guidelines (907-267-2172; billh@fishgame.state.ak.us). When you submit your abstract to Stan Senner, please notify him know if you are preparing a poster; send a cc to Bill Hauser at the e-mail above.

Last year several projects also made use of computer presentations, and we again welcome such displays. **Please contact Stan Senner by December 16 if you would like to set up a computer at the workshop.** We need to know what space and hook-ups you require (including telephone). These requests will require special consideration due to limitations at the hotel.

Accommodations and Per Diem
Workshop participants are responsible for their own lodging and travel arrangements. To make room reservations at the Hotel Captain Cook, call 1-800-478-3100. From outside of Alaska, call 1-800-843-1950. Room rates are $75.00 single and $85.00 double (+ 8% tax). Ask for the rate for Group No. 52519.

Please plan on having lunch in the hotel for the first two days (Thursday & Friday) of the workshop. As was the case last year, we have arranged to have a buffet lunch served at noon both days. The workshop schedule is very full, and this will allow us to keep the lunch break to one hour. We also had feedback from participants last January that these lunches were a positive opportunity to continue discussions about projects and the day's events at the workshop. The Restoration Office will cover the cost of the lunch, but **please remember that any per diem claims for conference expenses must be adjusted accordingly**.

Community Facilitators
Community facilitators from 10 participating rural areas (Alaska Peninsula, Chenega, Cordova, Kodiak, Nanwalek, Port Graham, Seldovia, Seward, Tatitlek, and Valdez) will attend the workshop again this year. Some of you have been contacted about making a presentation to the facilitators in a break-out session. **If you have a special interest in meeting with any or all of the facilitators, please contact Martha Vlasoff at the Restoration Office.**

You will receive a draft agenda sometime in December. Have a good Thanksgiving holiday.

encl: abstract and poster guidelines

GUIDELINES FOR ABSTRACTS DUE DECEMBER 16

Abstracts are needed from the project leader or principal investigator for each project that received EVOS Trustee Council funding in FY 1996. Please submit no later than Monday, **December 16, 1996,** to Stan Senner, Science Coordinator, at the Restoration Office, 645 G Street, Suite 400, Anchorage, AK 99501. Please submit your abstract on a diskette (w/hard copy) or by e-mail (<stans@oilspill.state.ak.us>), preferably in a WordPerfect 6.0/6.1 (or ASCII) format.

Abstracts should be a **maximum of one type-written, single-spaced page**, and should include:

(1) project number and title;

(2) principal investigators, including names, mailing addresses (for each PI, if different), and telephone number for the lead investigator;

(3) purpose and objectives of the restoration study or project, including reference to injured resources (include scientific names for plants and animals);

(4) study area;

(5) brief mention of primary methods, materials, equipment (especially if not standard);

(6) description of major results in 1996, with reference to earlier results as needed; and

(7) summary comments that interpret or evaluate the results, especially in view of the status of the injured resource, restoration objectives, management applications, or future program directions.

These last two items are the most important, and should account for most of the substance of the abstract. Your abstract should not include detailed descriptions of experiments, organisms, and standard methods, nor references to the literature. In most cases tables and graphs will not be appropriate, but can be included if the abstract does not exceed one page.

Please write in plain English--i.e., use a minimum of jargon. These abstracts need to be understandable to readers of various backgrounds and levels of education.

A sample abstract is on the back of these guidelines. If you have questions, please call Stan Senner at 907-278-8012 or contact him by e-mail.

Project Number and Title: 96163E - APEX Project Component E - Reproduction and foraging of black-legged kittiwakes.

Principal Investigators: David Irons and Robert Suryan, U.S. Fish and Wildlife Service, 1011 E. Tudor Rd., Anchorage, Alaska 99503 (Phone 907/786-3376)

Abstract: The objective of this component was to determine relative food availability to kittiwakes at determined by foraging and reproductive parameters. Two sites in Prince William Sound (PWS) and one at the Barren Islands were compared. In 1995 we radio-tagged 60 kittiwakes and followed them during foraging trips with a boat. From this we located foraging areas that were used by birds breeding at specific colonies and exact locations where feeding took place. Birds from the Shoup Bay colony had a mean foraging trip duration of four hours and traveled more than 40km from the colony. Birds from Eleanor Island had a mean foraging trip duration of only two hours and traveled only 5km from the colony. Most foraging occurred within one kilometer of shore.

Birds at Shoup Bay ate mostly sandlance and herring, while birds at Eleanor Island and Seal Isalnd ate more herring and less sandlance. Birds at the Barren Islands ate mostly sandlance and capelin. These data support the prediction that birds at close colonies have more overlap in their diets than birds at distant colonies.

By combining the foraging data and the bird productivity data we see evidence that birds have flexible foraging behavior that can buffer their chicks against periods of food shortage. Birds from Shoup Bay had much longer foraging trips than birds at Eleanor, but chick growth rates were very similar at the two colonies. However, Irons has data from 1989 and 1990 that suggest a threshold beyond which the adults cannot buffer there chicks. These data suggest the relationship between forage fish abundance and seabird productivity is not linear, but is buffered by the adults.

We have historical data for Shoup Bay and all colonies in PWS which help put 1995 in perspective. Kittiwake productivity declined in PWS in 1990 and has remained low through 1995. By looking at reproductive parameters for all these years we concluded that kittiwake productivity in PWS has declined because of a decrease in available food and a increase in predation. Knowing that herring and sandlance are important prey species for kittiwakes, we suggest five possible reasons why food has declined in PWS since 1990: (1) the oil spill (2) disease in herring (3) competition with pink salmon smolt (4) an ecosystem shift in PWS that favors walleye pollack (5) a large-scale climatic shift in the Gulf of Alaska. We suggest that predation may have increased because the prey (pink salmon and herring) of a major predator, bald eagles, has decreased since the spill and bald eagles switched to preying more on kittiwake young.

Exxon Valdez Trustee Council 1997 Restoration Workshop

POSTER SESSION

Posters will be presented during the *Exxon Valdez* Trustee Council 1997 Restoration Workshop that will be held in the Hotel Captain Cook in Anchorage, 23 - 25 January, 1997.

Send your **Abstract** to Stan Senner, Oil Spill Trustee Council (with a copy to Bill Hauser). Contact Bill Hauser, ADF&G, if you have questions about **Arrangements** and to accommodate any special needs.

- Setting:
  - Similar to that of 1996 - a large room adjacent to main meeting room
  - shared space with coffee service and reception
  - Posters will be displayed along outer walls; the surface of one wall is a soft, flexible (folding) wall; the other is a hard, permanent, outer wall

- Allowable Space: The **space** that will be available for each poster will be a maximum of 3.5 linear feet wide unless you make special arrangements.

- Tips:
  - Keep it Simple.
  - Title, Author and contact information at the top.
  - Abstract at top left or top center.
  - Present only enough data to support conclusions; use figures, diagrams, and photos.
  - Text and all information must be legible from 4 feet away; use 14 point or larger font.

- Display \ attachment:
  - Suspension - Posters will be suspended from the walls; try to keep them light-weight
  - Velcro - NO
  - Tape - YES, masking tape and (or) hangers will be provided

- Other:
  - Who supplies backboard? - Presenter must assume final responsibility.
  - Contact Bill Hauser if you need some help or other information.
  - Setup and stop times for the poster display will be announced.
  - Date and time for poster presentation/discussions will be announced.

Contacts:

Stan Senner
Exxon Valdez Oil Spill Restoration Office
645 G Street
Anchorage, AK 99501
(907)278-8012
Fax(907)276-7178
E-mail stans@oilspill.state.ak.us

William J. Hauser
ADF&G - H&R
333 Raspberry Road
Anchorage, AK 99515
(907)267-2172
fax (907)267-2474
E-mail BillH@fishgame.state.ak.us

Contact Bill Hauser if you have any questions about the poster displays.

fn:POSTERS

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 "G" Street, Anchorage, AK 99501
Phone: (907) 278-8012 Fax: (907) 276-7178

MEMORANDUM

TO: Catherine Berg
Dave Gibbons
Byron Morris

FROM: Traci Cramer
Traci Cramer
Administrative Officer

DATE: November 25, 1996

RE: 1996 Audit Request

Our auditors, Elgee, Rehfeld & Funk, 9309 Glacier Highway, Suite B 200, Juneau, Alaska 99801, are conducting an annual audit of our financial statements. In order to supply the auditors with information necessary to perform audit procedures related to personnel transactions, it has been requested that the following information be provided to the auditors for those employees selected for testing:

1. A copy of the most recent employees' Personnel Action Form (or equivalent)
2. Documentation supporting the project/coding of employees' time

The auditors will notify each agency of payroll transactions selected to test as early as possible. It is requested that you ensure that a copy of this memorandum be forwarded to the appropriate individuals.

Thank you for your cooperation, if you have any questions give me a call at (907) 586-7238.

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 "G" Street, Anchorage, AK 99501
Phone: (907) 278-8012 Fax: (907) 276-7178

MEMORANDUM

TO: Agency Liaisons

FROM: Traci Cramer
Traci Cramer
Administrative Officer

DATE: November 25, 1996

RE: Quarterly Financial Report for the period ending September 30, 1996

Based on the information provided by the agencies, you will find attached summary financial reports relating to each of the Work Plans. Also attached is a copy of your agencies financial report by Work Plan. This report was used to generate the summary reports.

If the information for your agency was not captured correctly, or if an error has been identified, please contact me immediately at 586-7238.

attachments

cc: Molly McCammon
Bob Baldauf

Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 "G" Street, Anchorage, AK 99501
Phone: (907) 278-8012 Fax: (907) 276-7178

MEMORANDUM

TO: Trustee Council

THROUGH: Molly McCammon
Executive Director

FROM: Traci Cramer
Administrative Officer

DATE: November 25, 1996

RE: Quarterly Financial Report for the period ending September 30, 1996

The attached reports consolidate the financial information submitted by the agencies for the quarter ending September 30, 1996.

The first report is a summary of activity by restoration category. This report reflects the total adjusted authorization and the total expended/obligated by Work Plan year and restoration category.

The second report displays the financial information by Work Plan. This report is used to determine what portion of the unexpended/unobligated balance or lapse, is available to off-set future court requests. As of September 30, 1996, it is estimated that $2,131,758 is available.

The third report is a summary of financial information associated with the 1996 Work Plan. As of September 30, 1996, the unexpended and unobligated balance is $2,899,238.

If you have any questions regarding the information provided, please do not hesitate to contact me at 586-7238.

attachments

cc: Agency Liaisons
Bob Baldauf

Exxon Valdez Oil Trustee Council
Quarterly Financial Report As of September 30, 1996
Category

	92' Work Plan			93' Work Plan			94' Work Plan		
	Adjusted	Expended/	Percent	Adjusted	Expended/	Percent	Adjusted	Expended/	Percent
Category	Authorization	Obligated	Obligated	Authorization	Obligated	Obligated	Authorization	Obligated	Obligated
Administration	5,076,100	4,293,933	84.59%	4,158,518	2,659,348	63.95%	4,917,716	4,107,593	83.53%
General Restoration	4,102,929	3,792,301	92.43%	4,216,047	3,342,084	79.27%	5,303,100	3,184,804	60.06%
Habitat Protection	0	0	0.00%	486,200	156,760	32.24%	3,747,292	2,882,173	76.91%
Monitoring							2,972,768	2,668,761	89.77%
Research							8,640,710	8,144,029	94.25%
Monitoring and Research	2,237,929	2,206,601	98.60%	4,628,716	4,012,718	86.69%	725,373	566,270	78.07%
Damage Assessment	7,807,100	6,416,109	82.18%	1,991,342	1,566,957	78.69%			
Other Authorizations				7,500,000	7,500,000		31,950,000	31,950,000	
Total	19,224,058	16,708,944		22,980,823	19,237,867		58,256,959	53,503,630	

	95' Work Plan			96' Work Plan			97' Work Plan		
	Adjusted	Expended/	Percent	Adjusted	Expended/	Percent	Adjusted	Expended/	Percent
Category	Authorization	Obligated	Obligated	Authorization	Obligated	Obligated	Authorization	Obligated	Obligated
Administration	4,253,526	3,211,793	75.51%	3,418,500	2,957,635	86.52%	2,857,100	0	0.00%
General Restoration	4,567,280	3,942,092	86.31%	3,870,100	3,446,477	89.05%	4,782,100	0	0.00%
Habitat Protection	1,716,737	1,550,472	90.32%	3,304,100	2,073,945	62.77%	1,282,600	0	0.00%
Monitoring	3,080,926	2,537,454	82.36%	1,576,400	1,491,835	94.64%	826,700	0	0.00%
Research	11,192,731	10,764,132	96.17%	13,706,700	13,006,670	94.89%	11,531,400	0	0.00%
Monitoring and Research									
Damage Assessment									
Other Authorizations	49,629,042	49,629,042		29,349,367	29,349,367		4,984,266	4,984,266	
Total	74,440,242	71,634,985		55,225,167	52,325,929		26,264,166	4,984,266	

Work Plan Time Periods:

92' Work Plan- Oil Year 4 or March 1, 1992 through February 28, 1993
93' Work Plan - Oil Year 5 or March 1, 1993 through September 30, 1993 (Seven Month Transition)
94' Work Plan - October 1, 1993 through September 30, 1994
95' Work Plan - October 1, 1994 through September 30, 1995
96' Work Plan - October 1, 1995 through September 30, 1996
97' Work Plan - October 1, 1996 through September 30, 1997

Exxon Valdez Oil Trustee Council
Quarterly Report as of September 30, 1996
Summary

DRAFT

WORK PLAN AND ASSOCIATED PROJECTS

Fiscal Year	Authorized	Adjustments	Adjusted Authorization	EVOS Expenditures	RSA Expenditures	Obligations	Unobligated Balance	EVOS Lapse	Federal Lapse	State Lapse
1992	19,211,000	13,058	19,224,058	13,988,844	2,720,100	0	5,204,542	5,204,542	1,584,506	3,620,036
1993	15,498,826	-18,003	15,480,823	11,731,853		6,014	3,181,143	3,181,143	1,169,084	2,012,059
1994	26,306,959	0	26,306,959	21,476,966		76,664	3,713,529	3,713,529	1,413,438	2,300,091
1995	24,811,200	0	24,811,200	21,473,099		532,844	2,805,257	2,805,257	359,696	2,445,561
1996	25,875,800	0	25,875,800	17,870,100		5,106,462	2,899,238	0	0	0
1997	21,279,900	0	21,279,900	0		0	21,279,900	0	0	0
TOTAL	**132,983,685**	**-4,945**	**132,978,740**	**86,540,862**	**2,720,100**	**5,721,984**	**39,083,609**	**14,904,471**	**4,526,724**	**10,377,747**
Total Reported Lapse (1992 through 1995)								13,031,745	4,492,747	8,538,998
Unreported Lapse (1992 through 1995)								1,872,726	33,977	1,838,749
Unreported Interest								246,012	29,043	216,969
Other Revenue (Posters/Symposium Receipts)								13,020	0	13,020
Total Available to Off-set Future Court Requests								**2,131,758**	**63,020**	**2,068,738**

OTHER AUTHORIZATIONS

Agency	Description	Total	Expenditures	Obligations	Expended/ Obligated
ADNR	Kachemak Bay	7,500,000	7,500,000	0	7,500,000
ADNR	Seal Bay/Afognak	36,473,709	36,473,709	0	36,473,709
ADNR	Shuyak	10,194,266	10,194,266	0	10,194,266
ADNR	Small Parcels	5,020,500	4,760,500	260,000	5,020,500
ADF&G	Alaska SeaLife Center	24,956,000	4,041,795	20,914,205	24,956,000
DOI	Small Parcels	3,113,200	168,000	2,945,200	3,113,200
DOI	Old Harbor	11,250,000	11,250,000	0	11,250,000
DOI	Akhiok-Kaguyak	28,500,000	21,000,000	7,500,000	28,500,000
DOI	Koniag	12,500,000	8,000,000	4,500,000	12,500,000
USFS	Orca Narrows	3,650,000	3,650,000	0	3,650,000
USFS	Small Parcels	211,000	0	211,000	211,000
	Total	143,368,675	107,038,270	36,330,405	143,368,675

Footnote: The Unobligated Balances have been adjusted to reflect the carry forward of projects. This includes $30,672 in FY 92', $561,813 in FY 93' and $1,039,800 in FY 94'.

Exxon [illegible] Oil Spill

Quarterly Report as of September 30, 1996

1996 Work Plan Summary

Project Number	Description	Authorized	Adjustments	Adjusted Authorization	Expenditures	Obligations	Expended/ Obligated	Unobligated Balance
96001	Recovery of Harbor Seals: Condition and Health Status	214,100	0	214,100	53,422	149,229	202,651	11,449
96007A	Archaeological Index Site Monitoring	145,100	0	145,100	100,162	38,612	138,774	6,326
96007B	Site Specific Archaeological Restoration	78,400	0	78,400	78,209	0	78,209	191
96009D	Survey Octopuses in Intertidal Habitats	142,300	0	142,300	9,594	131,600	141,194	1,106
96012-BAA	Comprehensive Killer Whale Investigation	93,100	8,000	101,100	44,079	55,762	99,841	1,259
96025	Mechanism of Impact and Potential Recovery of Nearshore Vertebrate Predators	1,865,200	0	1,865,200	1,636,020	182,246	1,818,266	46,934
96027	Kodiak Archipelago Shoreline Assessment	35,200	0	35,200	33,933	248	34,181	1,019
96031	Development of a Productivity Index for Marbled and Kittlitz's	77,600	0	77,600	77,769	0	77,769	-169
96038	Publication of Seabird Restoration Workshop	22,200	0	22,200	17,705	0	17,705	4,495
96043B	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement	29,600	0	29,600	22,271	0	22,271	7,329
96048-BAA	Historical Analysis of Sockeye Salmon Growth Among Populations	109,000	0	109,000	37,168	30,528	67,696	41,304
96052	Community Involvement and Use of Traditional Knowledge	271,000	0	271,000	267,256	246	267,502	3,498
96064	Monitoring, Habitat Use and Trophic Interactions of Harbor Seals in PWS	347,300	0	347,300	233,715	25,508	259,223	88,077
96074	Herring Reproductive Impairment	140,000	0	140,000	138,635	215	138,850	1,150
96076	Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon	377,800	0	377,800	353,559	20,794	374,353	3,447
96086	Herring Bay Monitoring and Restoration Studies	173,000	0	173,000	172,465	133	172,598	402
96090	Mussel Bed Restoration and Monitoring	205,100	-5,200	199,900	192,494	3,666	196,160	3,740
96100	Administration, Public Information and Scientific Management	3,418,500	0	3,418,500	2,680,297	277,338	2,957,635	460,865
96101	Removal of Introduced Foxes From Islands	8,400	0	8,400	6,736	0	6,736	1,664
96106	Subtidal Monitoring: Eelgrass Communities	253,100	0	253,100	196,338	28,121	224,459	28,641
96115	Sound Waste Management Plan	49,700	0	49,700	49,700	0	49,700	0
96126	Habitat Protection Acquisition Support	3,304,100	0	3,304,100	1,763,813	310,132	2,073,945	1,230,155
96127	Tatitlek Coho Salmon Release	26,600	0	26,600	15,624	7,927	23,551	3,049
96131	Chugach Native Region Clam Restoration	274,900	0	274,900	47,713	208,749	256,462	18,438
96139A1	Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass	55,000	0	55,000	24,138	6,059	30,197	24,803
96139A2	Spawning Channel Construction Project - Port Dick, Lower Cook Inlet	230,500	0	230,500	201,460	7,901	209,361	21,139
96139C1	Montague Riparian Rehabilitation Monitoring Program	9,700	0	9,700	8,358	0	8,358	1,342
96142-BAA	Status and Ecology of Kittlitz's Murrelet in PWS	160,800	0	160,800	94,436	62,937	157,373	3,427
96144	Common Murre Population Monitoring	70,500	0	70,500	65,167	0	65,167	5,333
96145	Cutthroat Trout and Dolly Varden: Relation Among and Within Populations of Anadromous and Resident Forms	200,000	0	200,000	119,109	80,891	200,000	0
96149	Archaeological Site Stewardship	74,400	0	74,400	54,619	23,594	78,213	-3,813
96154	Comprehensive Community Planning for Restoration of Archaeological Resources in PWS and Lower Cook Inlet	206,300	0	206,300	108,771	92,070	200,841	5,459
96159	Surveys to Monitor Marine Bird Abundance in PWS During Winter and Summer	262,900	0	262,900	260,978	0	260,978	1,922
96161	Harlequin Duck - Indicator Species for Ecological Monitoring and Recovery	87,400	0	87,400	80,620	0	80,620	6,780

Exxon V[illegible] Oil Spill

Quarterly Report as of September 30, 1996

1996 Work Plan Summary

Project Number	Description	Authorized	Adjustments	Adjusted Authorization	Expenditures	Obligations	Expended/ Obligated	Unobligated Balance
96162	Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in PWS	635,000	0	635,000	453,851	152,898	606,749	28,251
96163A	Abundance and Distribution of Forage Fish and Their Influence on Recovery of Injured Species	406,600	0	406,600	23,916	380,000	403,916	2,684
96163B	Foraging of Seabirds	132,200	0	132,200	133,357	0	133,357	-1,157
96163C	Fish Diet Overlap Using Fish Stomach Content Analysis	69,000	0	69,000	53,978	315	54,293	14,707
96163D	Distribution of Forage Fish as Indicated by Puffin Diet Sampling	12,000	0	12,000	8,495	0	8,495	3,505
96163E	Black-legged Kittiwakes as Indicators of Forage Fish Availability	164,400	0	164,400	161,712	0	161,712	2,688
96163F	Factors Affecting Recovery of Pigeon Guillemot Populations	148,300	0	148,300	151,840	0	151,840	-3,540
96163G	Diet Composition, Reproductive Energetics, and Productivity of Seabirds	171,200	0	171,200	58,042	112,103	170,145	1,055
96163I	APEX Planning and Project Leader	182,700	0	182,700	179,824	0	179,824	2,876
96163J	Barren Islands Seabird Studies	104,000	0	104,000	99,468	0	99,468	4,532
96163K	Using Predatory Fish to Sample Forage Fish	4,700	0	4,700	4,366	0	4,366	334
96163L	Historical Review of Ecosystem Structure in the PWS/GOA Complex and Abundance and Distribution of Forage Fish in the Barren Islands	97,400	0	97,400	52,614	14,595	67,209	30,191
96163M	Lower Cook Inlet Study	214,000	0	214,000	214,000	0	214,000	0
96163N	Black-Legged Kittiwake Feeding Experiment	21,400	0	21,400	20,000	0	20,000	1,400
96163O	Statistical Review	21,400	0	21,400	20,000	0	20,000	1,400
96163P	Sand Lance Hydrocarbon Exposure	21,400	0	21,400	1,291	20,000	21,291	109
96164	Pacific Herring Program Leadership	0	0	0	0	0	0	0
96165	Genetic Discrimination of Prince William Sound Herring Populations	103,900	0	103,900	20,160	67,093	87,253	16,647
96166	Herring Natal Habitats	444,100	0	444,100	323,270	54,402	377,672	66,428
96170	Isotope Ratio Studies of Marine Mammals	150,400	0	150,400	44,484	97,368	141,852	8,548
96180	Kenai Habitat Restoration and Recreation Enhancement Project	560,600	0	560,600	230,924	243,844	474,768	85,832
96186	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound	254,900	0	254,900	217,484	275	217,759	37,141
96188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS	93,200	0	93,200	80,662	112	80,774	12,426
96190	Construction of Linkage Map for Pink Salmon Genome	167,700	0	167,700	120,277	35,121	155,398	12,302
96191A	Oil-Related Embryo Mortalities in PWS Pink Salmon Populations	474,600	0	474,600	348,399	80,134	428,533	46,067
96191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oil Gravel	143,600	0	143,600	143,488	0	143,488	112
96195	Pristane Monitoring in Mussels and Predators of Juvenile Pink Salmon & Herring	106,700	0	106,700	115,550	3,475	119,025	-12,325
96196	Genetic Structure of Prince William Sound Pink Salmon	178,500	0	178,500	135,977	13,159	149,136	29,364
96210	Prince William Sound Youth Area Watch	115,000	0	115,000	98,804	12,411	111,215	3,785
96214	Documentary on Subsistence Harbor Seal Hunting in PWS	77,400	0	77,400	49,526	19,453	68,979	8,421
96220	Eastern PWS Wildstock Salmon Habitat Restoration	92,000	0	92,000	70,433	0	70,433	21,567
96222	Chenega Bay Salmon Restoration	16,100	0	16,100	3,848	0	3,848	12,252
96225	Port Graham Pink Salmon Subsistence Project	95,300	0	95,300	53,146	34,732	87,878	7,422

Exxon Valdez Oil Spill

Quarterly Report as of September 30, 1996

1996 Work Plan Summary

Project Number	Description	Authorized	Adjustments	Adjusted Authorization	Expenditures	Obligations	Expended/ Obligated	Unobligated Balance
96244	Community Based Harbor Seal Management and Biological Sampling	128,500	0	128,500	121,395	1,556	122,951	5,549
96255	Kenai River Sockeye Salmon Restoration	307,000	0	307,000	280,068	389	280,457	26,543
96256	Columbia and Solf Lakes Sockeye Salmon Stocking	60,800	0	60,800	52,418	0	52,418	8,382
96258A	Sockeye Salmon Overescapement Project	596,600	0	596,600	501,345	4,160	505,505	91,095
96259	Restoration of Coghill Lake Sockeye Salmon	265,700	0	265,700	195,469	200	195,669	70,031
96272	Chenega Chinook Release Program	52,300	0	52,300	47,049	744	47,793	4,507
96290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	116,100	-2,800	113,300	108,510	3,088	111,598	1,702
96291	Chenega-Area Shoreline Residual Oiling Reduction	293,000	0	293,000	0	260,000	260,000	33,000
96320E	Salmon and Herring Predation	637,700	0	637,700	570,132	6,872	577,004	60,696
96320G	Phytoplankton and Nutrients	162,200	0	162,200	159,087	54	159,141	3,059
96320H	Zooplankton in the PWS Ecosystem	323,600	0	323,600	249,294	66,191	315,485	8,115
96320I	Isotope Tracers - Food Webs of Fish	270,300	0	270,300	150,461	117,217	267,678	2,622
96320J	Information Systems and Model Development	749,300	0	749,300	386,902	354,890	741,792	7,508
96320K	PWSAC: Experimental Fry Release	61,400	0	61,400	55,004	1,944	56,948	4,452
96320M	Physical Oceanography in PWS	645,800	0	645,800	304,730	337,815	642,545	3,255
96320N	Nekton/Plankton Acoustics	589,200	0	589,200	361,737	225,141	586,878	2,322
96320Q	Avian Predation on Herring Spawn	40,400	0	40,400	22,183	18,217	40,400	0
96320R	SEA Trophodynamic Modeling and Validation Through Remote	202,700	0	202,700	129,877	69,166	199,043	3,657
96320T	Juvenile Herring Growth and Habitat Partitioning	1,141,600	0	1,141,600	698,479	424,426	1,122,905	18,695
96320U	Energetics of Herring and Pollock	189,500	0	189,500	105,035	80,625	185,660	3,840
96320Y	Variation in Local Predation Rates on Hatchery-Released Fry	40,000	0	40,000	37,191	880	38,071	1,929
96320Z1	Synthesis and Integration	68,800	0	68,800	33,654	32,619	66,273	2,527
96326	Data Re-Analysis for NRDA Marine Mammal Study 6	11,400	0	11,400	11,400	0	11,400	0
96427	Harlequin Duck Recovery Monitoring	261,100	0	261,100	203,508	14,116	217,624	43,476
96507	EVOS Symposium Publication	35,000	0	35,000	35,000	0	35,000	0
96600	NOAA Program Management	105,400	0	105,400	88,753	156	88,909	16,491
95259	Restoration of Coghill Lake Sockeye Salmon Supplemental	21,900	0	21,900	21,900	0	21,900	0
	Unbilled GA (ADF&G Only)				0	0	0	0
	Sub-Total	25,875,800	0	25,875,800	17,870,100	5,106,462	22,976,562	2,899,238
	Akhiok-Kaguyak	0	0	0	0	0	0	0
	Seal Bay	3,294,667	0	3,294,667	3,294,667	0	3,294,667	0
	Koniag	12,500,000	0	12,500,000	8,000,000	4,500,000	12,500,000	0
	Shuyak	8,000,000	0	8,000,000	8,000,000	0	8,000,000	0
	Small Parcels	5,554,700	0	5,554,700	4,928,500	626,200	5,554,700	0
	Total	55,225,167	0	55,225,167	42,093,267	10,232,662	52,325,929	2,899,238

Exxon Valdez Oil Spill Trustee Council
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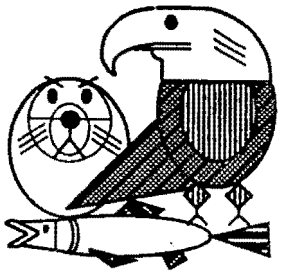

MEMORANDUM

To: Trustee Council

From: Molly McCammon
Executive Director

Subject: Reply to *BioScience* Article

Date: November 22, 1996

The September issue of *BioScience* had an article, "Oil, Seabirds, and Science," by Dr. John Wiens, who was Exxon's chief ornithologist for their studies following the oil spill. A copy of the Wiens paper is enclosed.

In Dr. Robert Spies' opinion, this paper on seabird science during the post-spill damage assessment is clearly "partisan" in character. I agree, and I sent the enclosed letter on the policy aspects of Wiens' paper to the editor of *BioScience*. I had a message from the editor earlier this week, and she will publish my reply, probably in the March issue.

I plan to discuss this and related issues with you in executive session on December 6. In the meantime, if you any comments or questions, please let me or Stan Senner know. Thank you.

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cc: Restoration Liaisons and Work Force

Exxon Valdez Oil Spill Trustee Council
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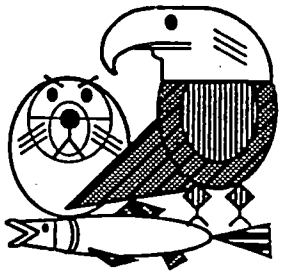

November 14, 1996

COPY

Editor
BioScience
1444 Eye Street, NW - Suite 200
Washington, DC 20005

Dear Editor:

John Wiens ("Oil, Seabirds, and Science," *BioScience* 46:587-597) is critical of the policies and work of the Trustees and scientists representing the United States and Alaska governments following the *Exxon Valdez* Oil Spill (hereafter, EVOS). The Trustees' damage assessment and restoration programs following the spill are open to public scrutiny and must be judged on their merits, but I was surprised by Wiens' adversarial tone and one-sided, sometimes misleading content. My comments concern the policy aspects of Wiens' article:

Wiens misrepresents Trustee policies on the definition and goals of recovery. He criticizes the concept of returning to pre-spill conditions or to conditions comparable to those of non-oiled areas as a static view of populations and ecosystems. This criticism is baseless because his view of ecosystems as dynamic is shared by the Trustees and is explicitly recognized in their draft and final restoration plans (EVOS Trustee Council 1993, 1994). Wiens fails to note that the Trustees' real goal is a return to conditions that would have existed had there been no oil spill--a vastly different concept than the one he attributes to the Trustees. Pre-spill conditions are used as proxies because of the difficulty in predicting what conditions would have existed absent the spill. The Trustees also recognize that a return to pre-spill conditions is unrealistic for populations that had declined or were declining at the time of the EVOS (e.g., marbled murrelet *Brachyramphus marmoratus*).

Wiens (1995, 1996) proposes that if injury cannot be detected statistically, then no injury occurred; recovery is achieved when previously documented statistical differences disappear. These "Hear-no-evil, see-no-evil..." definitions are good when data are ample; they also are convenient for an industry trying to limit its legal and economic liability. Realistically, it is difficult to detect significant effects when baseline data are limited, natural variability is high, and interpretation of off-site controls is complicated. In the absence of a convincing analysis of power, Peterson (1993) suggests that definitive conclusions about no effects are unjustified.

Wiens speculates about why scientists disagree about the EVOS impacts on seabirds. In doing so, he misrepresents the Trustees' approach to the initial damage assessment, alleging that U.S.

laws "dictate documentation of only damages" (p. 594). The Trustees' natural resource damage assessment was largely guided by the Comprehensive Environmental Response, Compensation, and Liability Act (Wiens cites the Oil Pollution Act, which wasn't law yet, and the Clean Water Act, which was of lesser importance): documentation of both injury and rates of natural recovery are required, and recovery was a concern from the outset (e.g., Trustee Council 1989). To be sure, Trustee-sponsored studies on seabirds during 1989-1991 focused on injuries for the simple reason that there can be no recovery if there was no injury. Studies that showed no or weak evidence of injury, due to no spill effect, poor science, lack of baseline data, or other factors were dropped. Studies that showed reasonable evidence of injury were sustained. Contrary to Wiens' assertion that emphasis on damages was intensified, it is the emphasis on restoration that has been intensified. In some cases the Trustees have sustained studies for eight years now, because of the need and responsibility to document recovery. Indeed, recovery and restoration have been the basis of the entire program since the out-of-court settlement with Exxon in October 1991.

Wiens describes how advocacy, litigation, and the news media can erode the scientific process. This is not news, and Wiens goes too far by implying that somehow these factors only pertain to the Trustees and their scientists and not to the Exxon Company, USA and its contractors. With reference to Exxon, of course, there is the added influence of wanting to limit legal and economic liabilities. Wiens is critical of dramatic, unsupported statements on the part of Trustee-sponsored scientists, but makes no attempt to apply the same standards and identify "science-advocacy interactions" (p. 595) on the part of Exxon and its contractors (e.g., Baker et al. 1990).

I was pleased to see Wiens' recognition that seabird populations may experience cumulative impacts from a series of natural (e.g., *El Nino* events) and anthropogenic (e.g., oil spills) environmental changes, but he is far too quick to conclude that "this scenario does not appear to have happened as a result of the *Exxon Valdez* spill" (p. 594). How does he support this conclusion? Is this a bit of advocacy-science interaction creeping in? The EVOS was superimposed on decadal-scale environmental changes in the northern Gulf of Alaska (e.g., Piatt and Anderson 1996). Resource managers, scientists, and people who derive their living from the sea are concerned about the long-term health of a constellation of fish-eating marine birds and marine mammals. There is good reason to suspect that the combined effects of the oil spill and natural environmental change may be part of the problem.

In 1995, in the interests of improving the restoration and science program, the Trustees supported an unsolicited proposal from the Pacific Seabird Group--a respected, independent organization of seabird biologists--to convene a group of the world's experts to review the EVOS restoration and injury assessment. Not incidentally, Wiens and other Exxon contractors were invited, but Wiens did not attend. The final report from this workshop of experts will be available soon, and I look forward to their criticisms and recommendations. Indeed, the Trustees welcome criticisms that are informed, balanced, and constructive--attributes that I did not find in the Wiens paper.

Finally, a word to the Editor of *BioScience*: it is not evident that anyone closely familiar with the policies and actions of the Trustees nor the work of the hundreds of highly-qualified, well-published scientists sponsored by the Trustees reviewed a draft of Wiens' manuscript. I am not familiar with your peer-review process, but it would seem only fair--essential, even--to have someone "inside" the Trustees' spill-science program comment on a draft of Wiens' paper. Thank you.

Sincerely,

Molly McCammon
Executive Director

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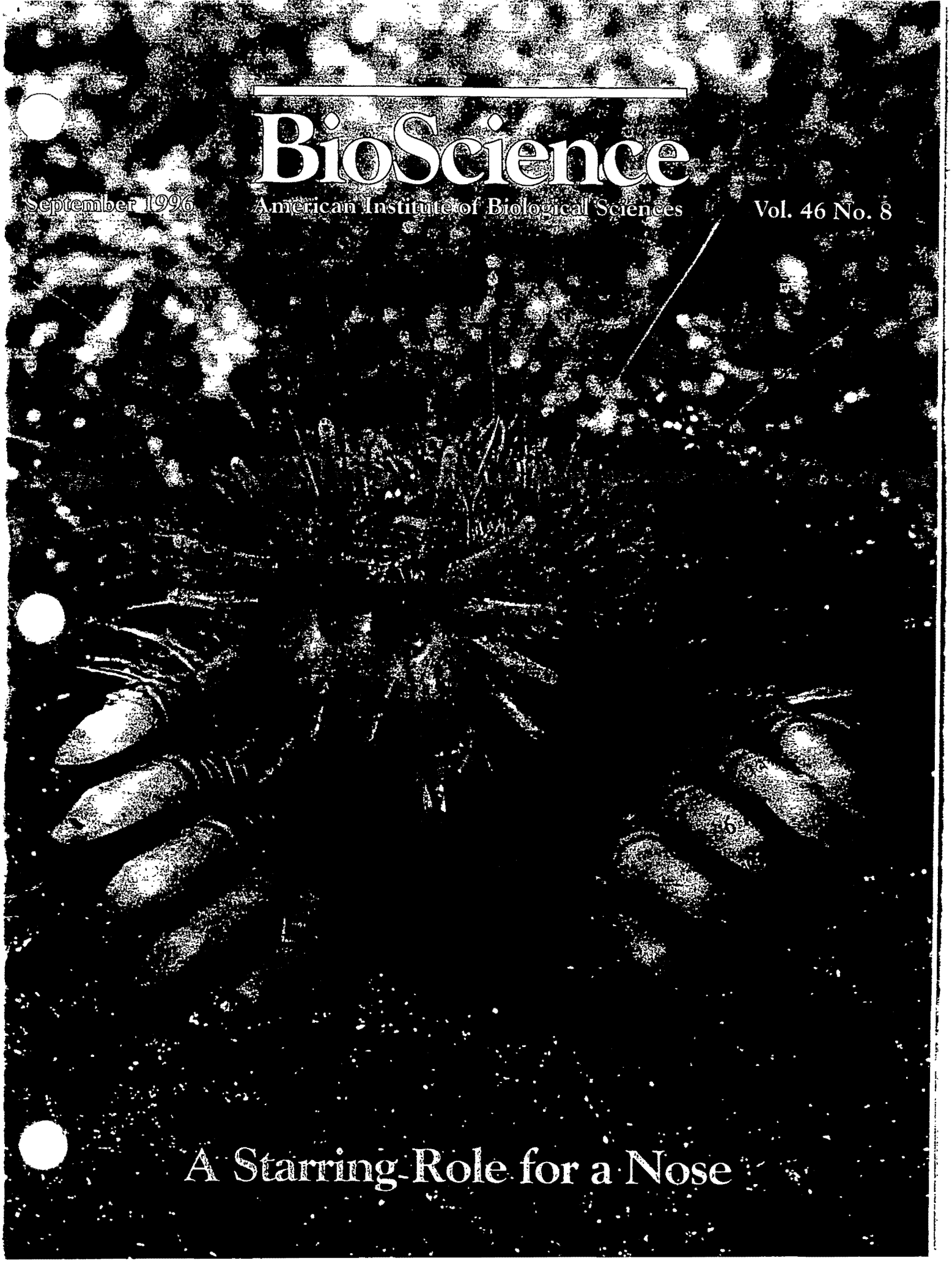

A Starring Role for a Nose

Oil, Seabirds, and Science

The effects of the Exxon Valdez *oil spill*

John A. Wiens

When the supertanker *Exxon Valdez* ran aground on Bligh Reef in Prince William Sound, Alaska, on the morning of 24 March 1989, it aroused widespread concern about possible environmental devastation. Within hours, some 41 million liters of crude oil were released into the marine ecosystem, making this spill the largest in US history. Eventually, oil was found more than 900 km from the spill site (Figure 1), and roughly 2100 km of shoreline were contaminated with oil (Neff et al. 1995).

Reports of mortality of marine birds were immediate, and images of oiled seabirds figured prominently in media coverage of the spill. Within a few months, more than 30,000 oiled carcasses had been retrieved from the water and beaches in the spill area, and estimates of overall mortality were substantially greater (Piatt et al. 1990). The magnitude of these mortality estimates led some scientists to declare that some breeding colonies had suffered major losses, that the breeding activity of some species was disrupted or failed entirely, that the intertidal habitats on which many species depend were severely impacted, and that the recovery of the local seabird populations might take decades to as much as a century, if a recovery was even possible (*Exxon Valdez* Oil Spill Trustee Council 1993, Fry 1993, Heinemann 1993, Nysewander et al. 1993a, Piatt et al. 1990).

When an environmental accident creates a potential conflict between science and environmental advocacy, science may suffer

Studies of the effects of the *Exxon Valdez* oil spill on seabirds were initiated shortly following the spill by researchers working for the State of Alaska and several federal agencies (the "Trustees") or supported by Exxon. By mid-summer 1989, however, litigation became a priority, and as a result the two groups conducted their studies separately, each with little knowledge of what the other group was doing. Reports of many of these studies have now been made public, and enough information is available to develop a general

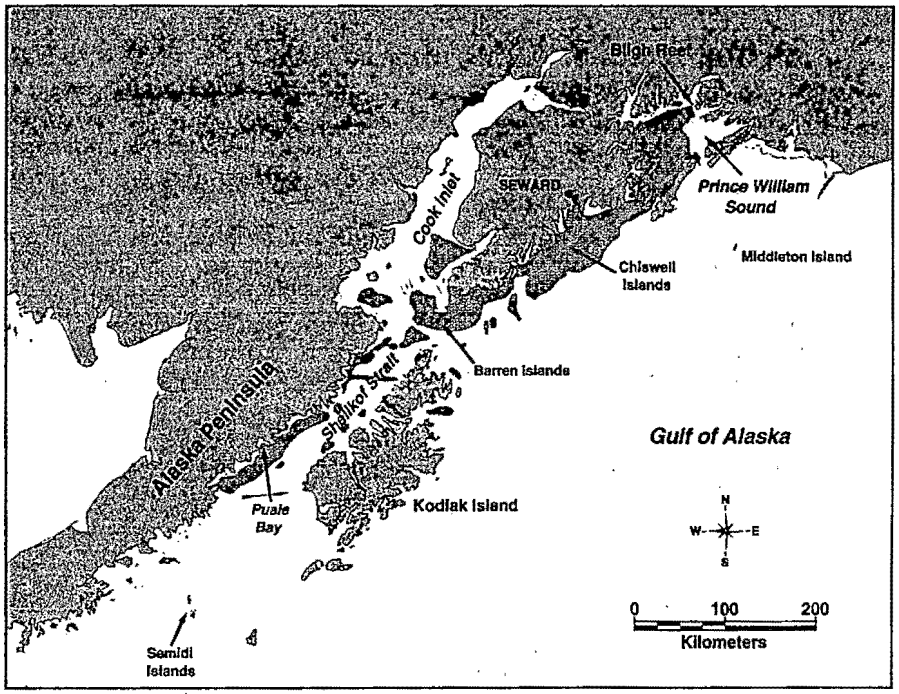

Figure 1. Map of the northern Gulf of Alaska and Prince William Sound, Alaska, showing locations mentioned in the text and the extent of the *Exxon Valdez* oil spill (in gray). Modified from *Exxon Valdez* Oil Spill Trustees (1992).

John A. Wiens is a professor in the Department of Biology and Graduate Degree Program in Ecology, Colorado State University, Fort Collins, CO 80523.

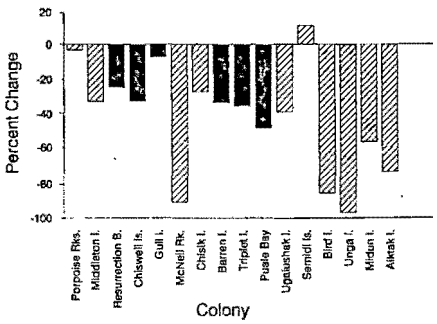

Figure 2. Estimated changes in abundances of common murres (*Uria aalge*) at breeding colonies in the Gulf of Alaska from surveys conducted during the 1970s and 1980s, before the *Exxon Valdez* oil spill, to postspill surveys. Colonies in the spill path are indicated by solid bars, those outside of the spill area by hatched bars. The colony sequence is from Prince William Sound (left) to the tip of the Alaska Peninsula (right). After Piatt and Anderson (in press).

assessment of how the spill affected seabirds and whether the initial concerns were justified. The studies also provide some insights into how the scientific process itself may be affected by such well-publicized environmental accidents and into the relationships among preconceptions, advocacy, and science. In this article, I discuss these findings and consequences, emphasizing the work in which I was directly involved. This work was funded by Exxon but was conducted and interpreted independently.

Seabirds and oil

Seabirds spend much of their lives at the air–water or land–water interface, where floating oil accumulates. This habit, combined with other features of the behavior, ecology, and life history of seabirds, suggests that they should be particularly vulnerable to oil spills. However, spills differ in the type of oil spilled, currents and weather conditions at the time of the spill, and the activities, abundances, and distributions of seabirds in the spill area. Consequently, there is little relationship between measures such as spill volume and seabird mortality (Burger 1993).

Oil spills may affect seabird populations in several different ways. Losses of individuals, through direct or indirect mortality or emigration from the spill area, may alter population size and structure. The reproductive performance of those birds that do remain may be altered. Finally, changes in the condition of the habitat may lead individuals to move elsewhere, influencing habitat occupancy and use.

Effects on population size and structure

Murres. Some 74% of the oiled carcasses retrieved following the *Exxon Valdez* spill were murres (*Uria* spp.; Piatt et al. 1990). Carcasses retrieved on beaches represent only a fraction of the mortality caused by a spill, however, and the magnitude of this apparent mortality indicated that impacts on breeding populations might be severe. Counts of birds in attendance at colonies (i.e., occupying nesting ledges) or flying or on the water near colonies had been conducted at most murre colonies in the Gulf of Alaska during the 1970s. These counts were intended only to document colony locations and provide coarse estimates of their sizes, but they were used by several investigators to make quantitative assessments of population changes after the *Exxon Valdez* spill. For example, comparisons of counts at murre colonies in the spill path by the US Fish and Wildlife Service (USFWS; Dragoo et al. 1993, Nysewander et al. 1993b) indicated that breeding numbers at several colonies were significantly reduced after the spill relative to counts in the 1970s (Figure 2). Noting the absence of concurrent declines in breeding populations of colonies at Middleton Island and the Semidi Islands, which are outside of the spill area (Figure 1), Nysewander et al. (1993a) concluded that the reductions within the spill area were caused by the *Exxon Valdez* spill. However, Middleton Island and the Semidis are exposed to different oceanographic conditions than are colonies in the spill path, and therefore their suitability as reference colonies is questionable (Piatt and Anderson in press, Wiens 1995).

Not all postspill surveys recorded population decreases, however. Two years after the spill, Erikson (1995)

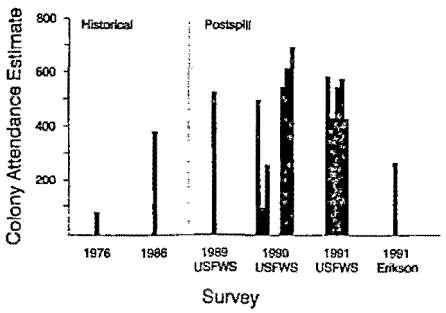

Figure 3. Murre colony attendance estimates at an unnamed island in the Chiswell Island group made before the *Exxon Valdez* oil spill compared with postspill estimates made by the US Fish and Wildlife Service (USFWS) and by D. Erikson. The 1990 and 1991 USFWS data are from surveys conducted on separate days over eight-day and six-day periods, respectively. The Chiswell Islands were close to the main spill trajectory (Figure 1) and were classified by Erikson in a high oiling risk category. After Erikson (1995).

surveyed 32 of the 36 murre colonies in the spill area (four small colonies were not surveyed). At an unnamed colony in the Chiswell Island group, for example, the two estimates from surveys conducted 3 years and 13 years before the spill differed considerably (Figure 3). Postspill counts conducted by USFWS in 1989–1991 generally exceeded the prespill counts, although there was much day-to-day variation in estimated colony attendance. Erikson's single postspill survey recorded fewer birds than were seen in the USFWS surveys, but the estimate was well within the range of the prespill counts.

These observations illustrate some of the limitations of such prespill versus postspill comparisons. Historical (prespill) surveys are usually few and old. If more than one historical data set is available, it is not always clear which set should form the baseline for comparison. The substantial daily variation among counts also complicates comparisons, because often only single counts are compared. These complications led Erikson (1995) to group colonies for analysis based on their level of oiling risk (a function of proximity to the spill path and the state of the oil when it passed through an area). If murres were assembling near their breeding colonies at the time of the

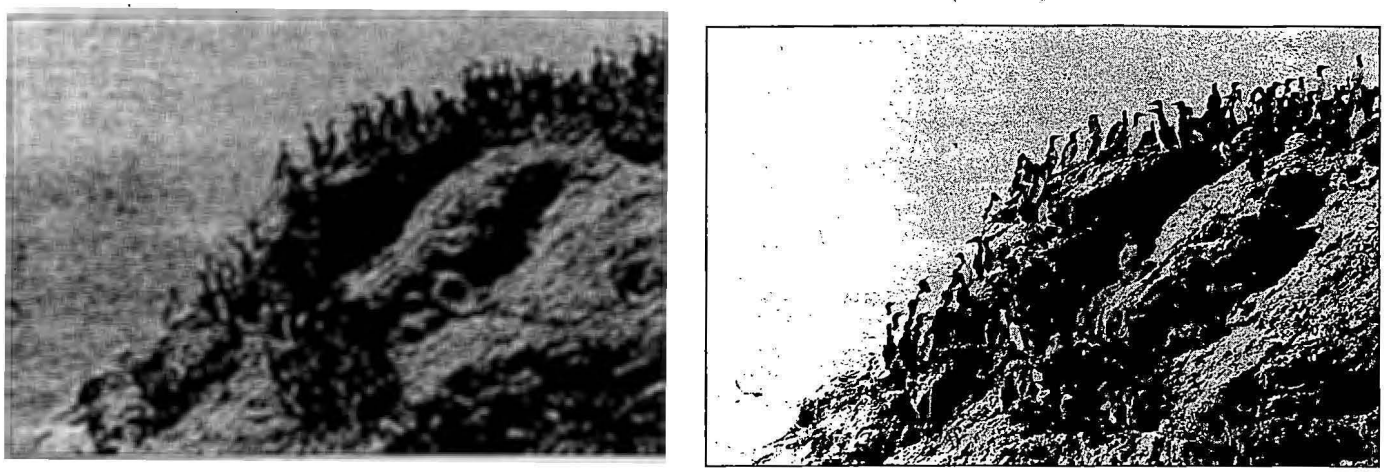

Figure 4. Photographs of the same murre nesting ledges on East Amatuli Island of the Barren Islands taken in 1976–1977, before the *Exxon Valdez* oil spill (left; photo: M. Amaral), and in 1991, after the spill (right; photo: A. Kettle). Photographs courtesy of P. D. Boersma.

spill, as has been suggested (Piatt et al. 1990), those colonies with greater oiling risk should have suffered greater losses in comparison with prespill levels. Such was not the case: postspill colony attendance levels were similar to those recorded before the spill, and prespill versus postspill changes in colony attendance did not differ significantly among oiling risk categories.

The largest murre colonies in the spill area are on the Barren Islands (Figure 1). Oil remained in this area for several weeks, and seabird mortality was considered great (Piatt et al. 1990). Fry (1993) suggested that 60%–80% of the breeding adults "were engulfed, carried away and killed by the oil." However, the results of Boersma and her colleagues, who had studied seabirds on East Amatuli Island (one of the Barren Islands) during the late 1970s and then again after the spill, raise doubts about Fry's suggestions. Counts made more than a decade before the oil spill[1] indicated that somewhere between 19,000 and 61,000 birds (with perhaps a "best guess" of 25,000 birds) were breeding on East Amatuli. Counts in 1990–1992 recorded roughly 31,000–35,000 birds in attendance (Boersma et al. 1995). The wide variation in prespill counts, which was due to differences in methods and observers as well as to real variations in murre abundance, makes it difficult to determine whether the population actually changed at all after the spill.

People working with Boersma on East Amatuli between 1976 and 1981 had also taken photographs of breeding murres in various locations. Boersma and colleagues assembled seven of these historical photographs that could be matched with photographs taken in 1990 or 1991. Comparisons of paired photographs (e.g., Figure 4) indicated that the number of birds was the same or greater in the 1990s than it was in the 1970s and 1980s.

These results from East Amatuli failed to reveal the sort of drastic population declines that were reported by USFWS (Dragoo et al. 1993, Nysewander et al. 1993b) or were expected from carcass-based mortality estimates. The differences among studies may stem from several factors. It has already been noted that many of the historical estimates were based on single surveys of colonies, which are subject to variations associated with weather, methods, observers, time of day, and season (Boersma et al. 1995). Some comparisons used historical data in which prespill abundances were erroneously overestimated (e.g., one count was inadvertently adjusted twice to account for breeding birds that were at sea when the count was made; Erikson 1995). Such errors would increase the likelihood of documenting large postspill reductions. Nevertheless, mortality of the magnitude projected for the *Exxon Valdez* spill should overwhelm many of these complications. How can the mortality estimates derived from carcass counts (e.g., Ecological Consulting, Inc. 1991, Piatt et al. 1990) be reconciled with the observations of Boersma et al. (1995) and Erikson (1995), particularly on the Barren Islands?

One possibility is that the model projections of mortality based on carcass counts (e.g., Ecological Consulting, Inc. 1991) were simply too high. In addition, many murre colonies have a pool of nonbreeding individuals that remain at sea in the vicinity of the colony (Birkhead and Hudson 1977). Individuals from this pool may have filled the vacancies created by the deaths of breeding adults, or the mortality might have affected the nonbreeding pool rather than breeding adults. Because the sizes of such at-sea pools cannot be estimated satisfactorily, changes in such pools would be difficult to detect. Another possibility is that the birds killed in a particular location were not necessarily destined to breed in nearby colonies. The ocean around the Barren Islands, for example, is especially productive and is a regional hot-spot for seabirds. Perhaps birds from colonies outside of the spill area were present when the oil passed through. If so, mortality would be spread among colonies over a larger region, and it would be difficult to document spill-associated changes at particular colonies.

[1]P. D. Boersma, 1995, personal communication. University of Washington, Seattle, WA.

Figure 5. Black oystercatchers forage on rocky beaches and intertidal areas. Their abundance and use of these habitats was negatively affected by the *Exxon Valdez* oil spill, but these effects disappeared within two years of the spill. Photo: J. Wiens.

Long-term, region-wide population trends may also make it difficult to detect specific effects of the *Exxon Valdez* spill. For example, from comparisons of prespill and postspill populations, Piatt and Anderson (in press) concluded that substantial declines (greater than 20% reduction) occurred from the 1970s to 1990s at 13 of 16 major murre colonies in the northern Gulf of Alaska. Eight of these 13 colonies were outside of the spill path (Figure 2). During this time period there were major changes in the flow patterns of the Alaska Coastal Current and sea temperatures in the Gulf of Alaska, perhaps triggered by the 1976 El Niño event (Royer 1993). These oceanographic changes were accompanied by shifts in fish populations and in seabird diets (Piatt and Anderson in press). Thus, seabird populations may have been under food stress and already declining before the oil spill occurred. Unfortunately, the quantity and quality of prespill colony data do not enable one to distinguish between effects of the *Exxon Valdez* spill and natural responses to changes in the marine environment (Boersma et al. 1995, Piatt and Anderson in press). The difficulty of detecting the effects of an environmental accident such as an oil spill against a background of substantial natural variation due to environmental changes continues to complicate the analysis of environmental impacts of all sorts.

Figure 6. Populations of pigeon guillemots in Prince William Sound declined during the 1980s, but after the *Exxon Valdez* oil spill the declines were greater in oiled than in unoiled areas, suggesting a spill effect. Populations in oiled areas showed clear evidence of recovery by 1991. No spill-related effects on guillemot reproduction or habitat use were evident. Photo: R. Day.

Other birds. Studies of other marine birds in the spill area were less intensive than those of murres. Counter to popular perception, however, these studies also suggest that long-term effects on population levels were either minimal or could not be linked with certainty to the *Exxon Valdez* spill. For example, the number of breeding black oystercatchers (*Haematopus bachmani*; Figure 5) increased from 1989 through 1991, suggesting a recovery from spill effects, although Andres (1993) concluded that direct, lethal effects of the spill had probably been minimal. Both pigeon guillemots (*Cepphus columba*; Figure 6) and marbled murrelets (*Brachyramphus marmoratus*) were less abundant after the spill than in the late 1970s, but populations of both species had declined in Prince William Sound during the 1980s, so these changes could not be attributed solely to the oil spill (Kuletz 1993, Oakley and Kuletz 1993). Oakley and Kuletz (1993) indicated that postspill reductions of pigeon guillemots were greater in oiled than in unoiled areas, however, which suggested a spill effect.

Two additional studies evaluated changes for large numbers of species by comparing surveys along shorelines in Prince William Sound conducted in the mid-1980s with matched surveys in 1989–1991. Although one might expect numbers to change over this time period due to natural variability, a decline in oiled areas relative to unoiled areas could indicate spill effects. Klosiewski and Laing (1994) found that between 1984–1985 and 1989–1991, populations of loons (*Gavia* spp.), harlequin ducks (*Histronicus histronicus*), scoters (*Melanitta* spp.), black oystercatchers, mew gulls (*Larus canus*), and arctic terns (*Sterna paradisaea*) decreased at sites within the overall spill zone (oiled areas) more than at sites outside the spill zone, whereas 14 other species showed no evidence of spill-related changes.

The distribution of oil in the spill area was patchy, however, and the birds in the overall spill zone were therefore exposed to different degrees of oiling. Using a subset of the same 1984–1985 data that Klosiewski and Laing (1994) used in their comparisons, Murphy

et al.[2] compared individual bays that were either heavily or moderately oiled with bays that were lightly oiled or unoiled. These workers found that declines were significantly greater in heavily or moderately oiled bays than in lightly oiled or unoiled bays for pelagic cormorants (*Phalacrocorax pelagicus*), black oystercatchers, and pigeon guillemots. Another 11 species showed no statistically significant evidence of negative spill impacts. Both oystercatchers and guillemots showed clear evidence of recovery by 1991, whereas data were insufficient to assess recovery for cormorants. In both the Klosiewski and Laing (1994) and the Murphy et al. studies, then, most of the species analyzed showed no systematic reduction in abundance in oiled (however defined) versus unoiled areas, and when recovery was assessed, most affected species did not show persistent effects.

In these comparisons, one must assume that changes over time are equivalent among areas and that environmental factors other than oiling do not differ systematically between the oiled and unoiled samples. This assumption is less likely to be violated if sites within a single location are compared (as Oakley and Kuletz [1993] did) or if oiling levels of sites are specified quantitatively (as in Murphy et al.[3]) than if the comparisons are based on broad regions that are likely to differ in a host of environmental features (as in Klosiewski and Laing 1994). Thus, the greater number of apparent spill impacts demonstrated in Klosiewski and Laing's study in comparison with that of Murphy et al. may be due at least in part to the confounding effects of broad-scale variation in other environmental factors.

Effects on reproductive performance

Murres. Because of the magnitude of their estimated losses from breeding colonies, investigations of reproduction also concentrated on murres. Initial studies conducted by USFWS suggested that there was total reproductive failure at some colonies in the spill path in 1989, that the onset of egg laying (breeding phenology) in other colonies was delayed by as much as a month, and that reproductive success remained below normal and phenology continued to be late at least through 1991 (Dragoo et al. 1993, Nysewander et al. 1993a, b). On the basis of these observations and the preliminary indications that breeding populations had declined abruptly following the oil spill, Nysewander et al. (1993a) and Fry (1993) proposed the following scenario. If densities of birds on breeding ledges were reduced, some of the missing adults might have been replaced by young, inexperienced birds breeding for the first time. These changes in population structure and social organization could lead to delayed courtship and egg laying, a reduction in breeding synchrony within colonies, and increased risk of predation on eggs or young. As a result, reproductive success could be reduced and, because of the late breeding, many of the remaining chicks could be susceptible to fall and winter storms. Fry (1993) asserted that, because of delayed breeding phenology in 1990–1992, winter storms "swept more than 100,000 young chicks off the cliffs to their deaths." Other statements set the losses due to delayed reproduction at more than 300,000 chicks (*Exxon Valdez* Oil Spill Trustee Council 1993). Fry (1993) feared that, should these patterns become entrained in the populations, the breeding failures could lead to the eventual extinction of some colonies.

Most of this argument is based on speculation rather than firm evidence. Projections of chicks lost due to delayed breeding are based on assumptions, not observations, and the age of breeding individuals in these colonies is unknown. The only testable components of this scenario are whether breeding densities were in fact reduced, breeding phenology was delayed, and reproductive success was markedly lower following the spill.

The studies of Boersma et al. (1995) in the Barren Islands provide some perspective on these issues. These workers found no long-term reduction in breeding density: murre attendance levels at the East Amatuli colonies a year or more after the spill were within the range of prespill estimates, and counts of birds were similar on identifiable nesting ledges in matched prespill and postspill photographs (e.g., Figure 4).

What about breeding phenology? At one 25-m^2 plot on Light Rock (East Amatuli Island) where breeding had been monitored during the 1970s, phenology varied among years and was not markedly later in 1990–1992 than in some (but not all) of the prespill years. During their studies in 1991 and following years, Boersma et al. (1995)[4] also used time-lapse photography from automated cameras on Light Rock to record breeding phenology and success. The photographic records indicated that phenology may differ considerably in different areas of the same colony. In 1991, for example, phenology in two nesting areas located in different habitats less than 20 m apart differed by more than a week.

Because phenology is so variable in time and space, it is difficult to establish what is normal for a breeding colony, much less for many colonies in a region. The initial claims of spill-related delays in breeding phenology were based especially on 1989 data, before Boersma et al. (1995) had initiated their studies. Although murre breeding phenology at the Barren Islands may have been late in 1989 relative to breeding times during the 1970s or to that at Middleton Island and the Semidis in 1989, phenology was also later in 1989 at other colonies outside of the spill area than it had been in other years (Piatt and Anderson in press). Moreover, some of the first-egg dates used by USFWS investigators were actually dates of the first visit to a colony on which eggs were observed; in those cases, eggs must have been laid some time earlier.[5,6] There are also indications that nesting phenology of murres in the northern Gulf of Alaska may have been perhaps two weeks

[2]S. M. Murphy, R. H. Day, J. A. Wiens, and K. R. Parker, submitted manuscript.
[3]See footnote 2.

[4]P. D. Boersma et al., 1994, personal communication. University of Washington, Seattle, WA.
[5]P. D. Boersma, 1993, personal communication. University of Washington, Seattle, WA.
[6]D. G. Roseneau, 1994, personal communication. US Fish and Wildlife Service, Anchorage, AK.

later during the early 1990s than in the 1970s, perhaps in response to long-term oceanographic changes (Piatt and Anderson in press). Breeding on the Barren Islands did begin somewhat earlier in 1993–1994 than in the early 1990s (Boersma et al. 1995, Piatt and Anderson in press). This shift might indicate recovery from a spill effect, but it could also express the natural variability that appears to characterize this system. In any event, none of the postspill studies has shown conclusively that any changes in breeding phenology resulted directly from the oil spill.

What, then, about reproductive success? Boersma et al.'s (1995) prespill and postspill observations from the 25-m^2 plot on Light Rock in the Barren Islands indicated that productivity was high in 1991 (and probably in 1978), intermediate in 1979 and 1990, and low in 1992. These observations were based on direct counts, which can disturb a breeding colony and thereby increase predation losses and artificially lower reproductive output. To reduce this effect, Boersma et al. (1995) used automated cameras on Light Rock. Cameras were installed in early July 1991, when egg laying was just beginning, and were not removed until mid-October, well after chicks had fledged. These photographic records indicated that there was a substantial loss of eggs and chicks in the previously disturbed 25-m^2 plot in comparison to the relatively undisturbed camera area. Based on analysis of the camera records, murres produced an average of 0.64–0.70 chicks per pair (clutch size is one) in 1991, well within the range of murre chick production documented by a variety of methods elsewhere in the species' geographic range (Boersma et al. 1995).

In contrast to these findings, Nysewander et al. (1993b) reported nearly total reproductive failure at every colony they monitored in the spill zone in 1989 and below-normal success at Puale Bay and the Barren Islands (Nord Island) in 1990 and 1991. Based on Nysewander et al.'s survey, murres at Nord Island in 1991 produced only 0.13 chicks per pair. In 1992, however, different observers recorded reproductive success at Nord Island twice that recorded in 1991 and productivity at Puale Bay that was within the normal range.[7] The differences in results between the various studies on the Barren Islands may be due in part to variations among colonies; Light Rock may provide better nesting habitat than Nord Island.[8] There may also be differences between the indirect assays of breeding activity used by Nysewander et al. (1993b; e.g., observations of presumed breeding postures of birds made from ships) and the direct plot counts and camera recordings used by Boersma et al. (1995). In combination, the observations of Boersma et al. (1995) and those reported by Piatt and Anderson (in press) do not support the expectations of massive and persistent effects on murre reproduction following the *Exxon Valdez* spill.

Other birds. Reproduction by other seabirds has been less intensively studied than that of murres. Oakley and Kuletz (1993) found no clear effects of the spill on pigeon guillemot reproduction. Reproductive success of black-legged kittiwakes (*Rissa tridactyla*) was reduced compared with prespill levels in oiled colonies in 1989, but productivity in other, unoiled colonies declined in 1990 and was low throughout the region through 1992 (Irons 1993). These reductions may have been related to changes in food supplies, which may or may not have been associated with the oil spill. Breeding activity of black oystercatchers was delayed in 1989, and hatching success and chick survival were lower in oiled than in unoiled areas (Andres 1993, Sharp and Cody 1993). Studies in subsequent years indicated subtle differences between oiled and unoiled territories in egg size and feeding rates of chicks, but fledging rates did not differ (Andres 1993).

Studies of spill effects on harlequin duck reproduction are more controversial. Patten (1993) suggested that harlequin ducks in western Prince William Sound (which included the spill area) were in poorer condition in 1989 and possibly contained higher tissue hydrocarbon levels than did birds from the eastern half of the Sound (which was unoiled). Patten reported "massive reproductive failure" of birds in the spill area and postulated that reproduction was persistently depressed because the ducks were feeding on contaminated blue mussels (*Mytilus trossulus*) that concentrated hydrocarbon residues from unweathered, toxic oil trapped beneath the mussel beds. He concluded that "unless measures are taken to remove oil from mussel beds, it is possible that a local extinction of Harlequin Ducks may occur within the oil spill area" (Patten 1993, p. 154). These statements have been repeated in the popular press (e.g., Chadwick 1993, Edgar 1993), but because Patten has published no details or quantitative results of his studies it is not possible to assess his conclusions scientifically.

Incidental observations made during habitat-use studies by Day, Murphy, and their colleagues,[9] however, indicated that harlequin ducks bred successfully in 1989 and subsequent years in bays that had been heavily oiled by the spill as well as in unoiled or lightly oiled bays. Moreover, blue mussels constitute only a small part of the diet of harlequin ducks, and although oil did remain in some mussel beds in Prince William Sound for several years after the spill, these sites constituted a small percentage of the total area of mussel beds in the Sound. Mussels from such beds exhibited elevated levels of polycyclic aromatic hydrocarbons (PAH), but the estimated PAH dosage that birds feeding on these beds would receive is far below the levels known to cause even sublethal effects in other species (Boehm et al. in press). It is hard to imagine that continuing low-level oil contamination in a few mussel beds could lead to the sort of widespread, persistent, and massive reproductive failure that Patten and others envisioned.

Effects on habitat occupancy and use

If an oil spill affects seabird population sizes or reproduction, then recovery from these effects requires

[7] See footnote 6.
[8] See footnote 6.
[9] R. H. Day and S. M. Murphy, 1993, personal communication. ABR, Inc., Fairbanks, AK.

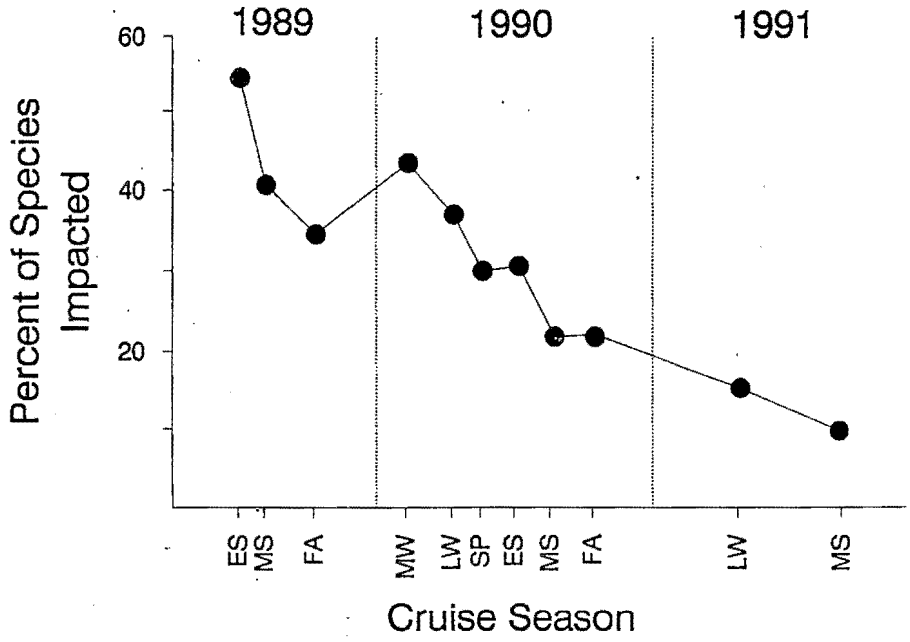

Figure 7. Percentage of marine-oriented bird species recorded on each of several survey cruises in Prince William Sound, Alaska, that exhibited negative impacts of the *Exxon Valdez* oil spill on habitat occupancy and use. ES = early summer, MS = mid-summer, FA = fall, MW = mid-winter, LW = late winter, SP = spring. After Day et al. (1995).

suitable habitat. Large quantities of oil from the *Exxon Valdez* spill contaminated the water surface and were deposited on beaches, especially in Prince William Sound. As a result of cleanup activities and natural weathering, little evidence of oiling now remains, and these habitats have returned to normal, at least to outward appearances.

Day et al. (1995) used measurements of bird occupancy and use of areas that received different amounts of oil following the spill as an assay of habitat suitability, arguing that highly mobile organisms such as birds would avoid clearly unsuitable habitats and that occupancy therefore provides a good measure of how the birds view habitat conditions. Day et al. (1995) based their analysis on quantitative measures of the extent and magnitude of initial oiling in each of several study bays in Prince William Sound, in which abundances of all marine-oriented bird species were surveyed at different seasons over a 2.5-year period following the spill. Both oiling and cleanup activities were greatest during the months immediately following the spill and diminished greatly in subsequent seasons and years. As a result, it is not possible to separate their effects, but separately or together they had the potential to produce spill-related impacts on habitat use by the birds.

Day et al. (1995) found that species differed in their responses to initial oiling of bays. Some species, such as tufted puffins (*Fratercula cirrhata*), showed no evidence of impacts of oiling on their use of bay habitats. Other species, such as black oystercatchers, were significantly less abundant in more heavily oiled bays soon after the spill, but this relationship diminished and then disappeared within a year or two, indicating recovery in habitat use by these birds. Day et al. (1995) conducted their first survey less than three months after the spill. At this time, more than 50% of the species recorded showed significant negative impacts on habitat use. The proportion of negatively impacted species decreased over time as recovery occurred. By the time of the final survey, in mid-summer 1991, only 10% of the 30 species present at that time still exhibited negative impacts (Figure 7). Over all surveys, 42 species could be analyzed statistically; of these, 23 (55%) showed no evidence of negative oiling impacts on their use of habitats at any time, 13 (31%) exhibited negative impacts with subsequent recovery, and only 6 (14%) still did not show clear signs of recovery in habitat use by the end of the study. These six species (horned grebe, *Podiceps auritus*; red-necked grebe, *Podiceps grisegena*; Barrow's goldeneye, *Bucephala islandica* [Figure 8]; bufflehead, *Bucephala albeola*; mew gull; and northwestern crow, *Corvus caurinus*) were primarily wintering or full-year residents closely associated with intertidal or nearshore habitats. Because the spill occurred in late winter and affected the intertidal zone most severely, the lingering effects on these species are not surprising. However, other, ecologically similar species, such as common goldeneyes (*Bucephala clangula*), black scoters (*Melanitta nigra*), and ravens (*Corvus corax*), either showed no spill-related impacts or recovered rapidly, so it seems unlikely that the ecological characteristics of the impacted species necessarily predispose them to suffering long-term spill effects.

These multispecies studies provide a perspective on the overall effects of the *Exxon Valdez* spill that is not apparent from investigations focused on single species of concern. They indicate that use of oiled habitats by many seabird species was reduced after the spill, but they also show that habitat use by other species apparently was not affected. Recovery of habitat use by most of the initially impacted species was rapid, and it appears that impacts of this spill on avian use of oil-affected habitats were not generally persistent.

Oil spills, recovery, and seabird resiliency

The *Exxon Valdez* oil spill had immediate effects on seabird populations. By any estimate, direct mortality was great, and reproduction and habitat use by several species were affected. Although it now appears that the spill had few persistent or devastating long-term effects on seabirds, in the years immediately after the spill there was considerable disagreement among scientists about the magnitude and extent of observed or expected impacts. There were several reasons for these disagreements.

from Wiens, J. 1996. Oil, seabirds, and science. BioScience 46:587-597.

Molly responds to this ??

First, some studies emphasized only the documentation of impacts, whereas other investigations sought to determine recovery as well. The primary focus of the Trustee studies, for example, was determined by US laws (e.g., Clean Water Act, Oil Pollution Act) that dictate documentation only of damages. Consequently, studies of species that did not appear to show initial impacts were not continued, and efforts to document damages in the remaining studies were intensified. This focus on damages produces an unbalanced view of spill impacts on the avian community as a whole (Wiens 1995).

Disagreements may also have been fostered by differing views about what constitutes recovery. The *Exxon Valdez* Trustee Council (1993) defined recovery as "a return to prespill conditions or to conditions comparable to those of nonoiled areas." This definition implies that, in the absence of a disruption such as an oil spill, populations would be in a steady-state equilibrium, with a stable age distribution, and that spatial variation in population levels would be negligible or random (Wiens and Parker 1995). Because of the short-term and long-term environmental variations that characterize marine ecosystems, however, these requirements are biologically unrealistic. Recovery should instead be defined statistically, as the disappearance of a previously documented significant relationship between a population and a measure of initial oil exposure (Day et al. 1995, Wiens 1995). This approach recognizes the variability of the systems and makes no a priori assumptions about equilibrium, but it raises the possibility of committing Type II errors, that is, of failing to detect impacts that really occurred. Day et al. (1995) dealt with these problems in statistical tests by using broad α levels (e.g., $\alpha < 0.20$ rather than the customary $\alpha < 0.05$). Use of such levels would enhance the likelihood of documenting impacts and reduce the likelihood of improperly concluding that recovery had occurred.

Despite these sources of uncertainty and the considerable variation in food supplies and oceanographic conditions that characterize the spill region, it is still apparent that seabird populations were not devastated by the spill. Much the same conclusion has emerged from studies of other major oil spills. Although several spills (e.g., the *Braer*, *Torrey Canyon*, and *Amoco Cadiz* spills, as well as the Persian Gulf War spill) have released substantially more oil than the *Exxon Valdez* spill, seabird mortality was considerably less (Burger 1993, Ritchie and O'Sullivan 1994, Symens and Al Suhaibani 1995), probably because of differences in the type of oil spilled, weather conditions, or the environments in which the spills occurred.

In these other spills, major effects on population sizes or reproduction were generally absent or recovery was rapid. The wreck of the *Braer* on the Shetland Islands, off the coast of Scotland, in January 1993, for example, was associated with substantial decreases in the numbers of breeding shags (*Phalacrocorax aristotelis*) and black guillemots (*Cepphus grylle*), but these effects were limited and localized (Ritchie and O'Sullivan 1994). Breeding success in the following summer was not affected. Studies following the Gulf War oil spills reported similar findings (Symens and Al Suhaibani 1995). On the other hand, some spills have contributed to significant declines in populations, such as that of jackass penguins (*Spheniscus demersus*) off South Africa (Frost et al. 1976).

Although it is clearly difficult to generalize about the effects of oil spills on seabirds, seabird populations do appear to have considerable resiliency to the disruptions associated with environmental accidents such as oil spills. In fact, the natural variability that is the bane of ecologists attempting to assess spill effects may be the basis for this resiliency. High-latitude seabird populations have evolved in harsh and variable environments. They naturally experience episodic reproductive failures (Harris and Wanless 1991, Wooller et al. 1992) and localized mortality (so-called wrecks) associated with variations in food supplies or severe storms (Harris and Wanless 1984). Because individuals of many species have long life spans, the loss of reproductive opportunities in one or several years may have relatively little effect on long-term demographics. Pools of nonbreeding birds may provide a "buffer" from which individuals may be recruited to replace losses from breeding colonies (Klomp and Furness 1992), and movements between breeding sites may also contribute to population resiliency (Wiens 1995, Wooller et al. 1992). Seabird populations are large-scale, open systems, in which the effects of oil spills may be relatively localized and rapidly dissipated.

This apparent resiliency of seabird populations, however, should not give rise to complacency. The *Exxon Valdez* spill contributed to the deaths of many tens of thousands of seabirds, and there were at least short-term effects on reproduction and habitat use. Such effects cannot be disregarded, even if they may not be biologically important in the long run. Furthermore, if seabird populations experience several severe environmental changes during a generation, the effects of these disruptions are likely to be cumulative. Adding one more disruption to the effects of food shortages, winter storms, El Niño events, or long-term oceanographic changes could push a population beyond the threshold of resiliency, leading to major, long-term demographic changes. Fortunately, this scenario does not appear to have happened as a result of the *Exxon Valdez* spill.

Effects of the spill on science

When an accident as dramatic as the *Exxon Valdez* spill occurs, many people fear the worst. Immediate effects on water quality, habitats, and wildlife are obvious. What is less obvious are the effects on the scientific process used to determine spill impacts. When an environmental accident (or, indeed, any environmentally contentious issue) creates a potential conflict between science and environmental advocacy, science may suffer.

To begin with, the operational hypothesis that an accident such as an oil spill has major impacts often replaces the statistical null hypothesis of no effect (Shrader-Frechette and McCoy 1993). Given the difficulties of designing proper studies and conducting relevant statistical

tests of either hypothesis, there may be a temptation to relax design requirements or to abandon statistical testing altogether and resort to common sense. After all, common sense tells us that an accident as big as the *Exxon Valdez* spill must have major, long-lasting effects. What is considered common sense, however, is often guided by preconceptions and emotions, which can lead easily to advocacy of a particular conclusion whether or not there is supporting evidence.

Advocacy can erode the objectivity and rigor of the scientific process. When one argues from "common sense" that an oil spill must have devastating ecological consequences, one is anticipating a particular result that may or may not be supported by empirical observations. Although there is nothing wrong with predicting a result (all good scientific hypotheses offer predictions), advocacy can bolster such expectations to the degree that contrary evidence is not considered or hypotheses are accepted without supporting evidence.

Litigation may act to both reinforce and counteract the weakening of science through advocacy. Litigation polarizes positions (plaintiff versus defendant) and may erect barriers against the free and open exchange of data and ideas integral to the scientific process. Lawsuits and charges were filed within weeks of the *Exxon Valdez* spill, for example, and as a result scientists working on opposite sides of the legal proceedings were unable to talk to one another, to develop a comprehensive design for gathering data, or to share information for more than four years, even though they were asking many of the same questions. Moreover, lawyers often want results to be presented in the simplest terms, uncomplicated by error terms or discussions of data limitations. This stipulation may generate pressures for scientists to provide data in a simplified form before they have been fully analyzed and interpreted or peer reviewed. The litigation context may also create pressures for scientists to take sides, thereby amplifying advocacy and lessening scientific credibility. Interviews with jurors after the 1994 civil trial in Alaska, for example, indicated that they were overwhelmed with conflicting testimony from scientific experts, so they largely ignored the scientific findings in reaching their verdict (Barker 1994).

Figure 8. Barrow's goldeneyes winter in Prince William Sound and feed close to the shoreline. Their use of these nearshore habitats was negatively affected by the *Exxon Valdez* oil spill, and these effects had not disappeared 2.5 years after the spill, when studies of seabird habitat use were concluded. Photo: R. Day.

It should be noted, however, that litigation does not inevitably promote advocacy and erode science. Scientific testimony in legal proceedings may be subjected to scrutiny that is more detailed and probing than typically occurs in peer review. Properly channeled, these pressures may encourage greater care and rigor in all phases of scientific research and lead to more intensive examination of results before they are publicized.

The media coverage that accompanies high-profile oil spills may also reinforce advocacy and weaken science. Unsupported and premature conclusions may be judged through the press rather than through normal peer review, and speculations can easily become converted to facts (Parrish and Boersma 1995, Wheelwright 1994).

The *Exxon Valdez* spill provides several examples of this advocacy–science interaction. Fry's (1993) statements that "western Prince William Sound became a dead zone overnight," and his title, "How do you fix the loss of half a million birds?," as well as Heinemann's (1993) declaration that the spill was "an unprecedented catastrophe for the common murres of the northern Gulf of Alaska" seem unnecessarily dramatic, especially in view of the meager empirical support. Nysewander et al. (1993b) initially labeled as speculation their suggestion that the replacement of breeding adults at murre colonies by young inexperienced breeders might have delayed egg laying and lowered reproductive success. Later in their article, however, this speculation was stated as a conclusion (Nysewander et al. 1993b). Burger and Fry (1993, p. 260) further strengthened this conclusion: "[C]hanges in the spatial structure of the impacted colonies and in bird behaviour caused almost complete breeding failure in 1989 and 1990 and the lost production of at least 215,000 murre chicks." In the popular press, this notion was now reported as fact: "With so few experienced breeding birds left, some colonies have failed to produce any young at all since the spill. In others, inexperienced birds are breeding a month late, leaving chicks vulnerable to predators and winter storms" (Pain 1993, p. 5).

Estimates of total seabird mortality from the *Exxon Valdez* spill also illustrate the influence of environmental advocacy, litigation influences, and media coverage (Parrish and Boersma 1995). Preliminary estimates placed total mortality at 100,000–300,000 birds (Figure 9; Piatt et al. 1990). Accounts in the popular press initially reported these values, then slightly higher estimates. Ford and his colleagues (Ecological

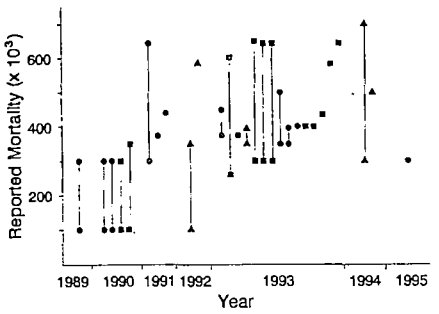

Figure 9. Estimates of total bird mortality from the *Exxon Valdez* oil spill reported in research papers or reports (circles), in the popular press (boxes), and in college textbooks (triangles) in the years specified. Lines connect the range of estimates given in a particular source. The single 1995 estimate is from a reevaluation of simulation model projections of mortality (Piatt and Ford in press). Modified from Parrish and Boersma (1995).

Consulting, Inc., 1991) estimated mortality using simulation models that incorporate functions describing what might happen to seabirds between their encounter with oil at sea and their retrieval as oiled carcasses on the beach. These simulations estimated mortality at 300,000–645,000, with best-guess approximations of 375,000–435,000 birds (Figure 9). Estimates subsequently reported in both the scientific and popular literature generally fell within this broad range, although a college textbook in environmental science (Miller 1992) stated that "the rapidly spreading oil slick is known to have killed 580,000 birds." Over time, estimates in the popular press progressively shifted toward the high end of the range. An environmental biology textbook published in 1994 stated that total mortality could have been as high as 700,000 individuals (Miller 1994). A recent reevaluation of some of the parameter values for Ford's model, however, led Piatt and Ford (in press) to conclude that the spill probably killed on the order of 250,000 birds (Figure 9).

Clearly, there has been a tendency among some scientists (e.g., Fry 1993) to use high-end estimates selectively, and this proclivity has been even greater among journalists and textbook writers. The estimates, however, are all founded on model projections from carcass counts. The only things that are certain are that approximately 30,000 oiled carcasses were retrieved and that this number represents some unknown fraction of the total number of birds killed by the spill.

Some of the research conducted following the *Exxon Valdez* oil spill was characterized by premature or incorrect claims, speculations that became facts, communication through the press rather than normal scientific channels, and a failure to examine data carefully. Unfortunately, public perception of the oil spill and its consequences is still based largely on such information, even though more rigorous and deliberative studies and reanalyses of some of the earlier work have shown that there were few obvious, long-term effects on seabirds.

What is the role of science and scientists in such large and contentious environmental accidents? Science can provide a necessary foundation for common sense, but it is the responsibility of scientists to remain objective and recognize situations in which the data indicate that what seems to be common sense is wrong. The role of the scientist, in both research and litigation, is to delineate the domain of scientifically supportable statements and to point out instances in which data are used selectively in the pursuit of advocacy. The importance of the environmental issues and the integrity of the scientific process demand no less.

Acknowledgments

This review has drawn on the work of a great many people, whose contributions I appreciate. Dee Boersma, Bob Day, Dave Erikson, Steve Murphy, Julia Parrish, and John Piatt were especially helpful in providing information, and Martin Heubeck and Peter Symens provided information on the *Braer* and Gulf War spills, respectively. Discussions with Keith Parker sharpened my insights about some of the issues involved in assessing the effects of oil spills. Dee Boersma, Alan Burger, Bill Burns, Bob Day, Gary Dowling, Hans Jahns, George Lock, Al Maki, Steve Murphy, Bob Paine, Bea Van Horne, Rich Wheeler, and an anonymous reviewer provided comments on drafts of the manuscript. Support for my work on the *Exxon Valdez* spill was provided by Exxon Company, U.S.A. The views expressed here are entirely my own and are not necessarily those of Exxon or of any of the individuals acknowledged above.

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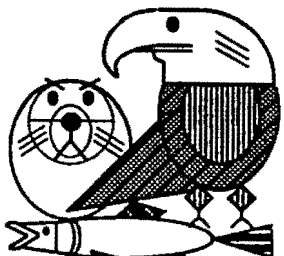

MEMORANDUM

To: Project Leaders or PIs Giving Talks at 1997 Restoration Workshop (see attached)

From: Stan Senner

Subject: Workshop Agenda

Date: November 22, 1996

I have heard back from most of you to confirm that you are giving an oral presentation on your project at the 1997 Restoration Workshop, which will be held January 23-25, 1997 at the Hotel Captain Cook in Anchorage. If you haven't already contacted me, please do so at your earliest convenience so that we can get the agenda nailed down.

Please note the likely time slot for your talk on the enclosed draft agenda. Bear in mind that this version is subject to change.

Each presentation should be 15 minutes, plus 5 minutes for questions (total of 20 min per talk). Slides are preferred, but an overhead projector also will be available. When you prepare your visuals, strive for clarity, high contrast, and readability. The room will be big, and people in the back need to be able to see what you are presenting. Also, please remember that the audience will include a mixture of scientists and people without technical backgrounds. Avoid jargon and strive for understandability by all. Finally, in terms of content, don't get bogged down in lengthy descriptions of methods, nor in the minutia of your data. Aim for highlights: What is the purpose of the project? What are you doing? What have you learned (i.e., the main results)? How will the results be applied (i.e., what is the restoration benefit)?

Thank you for your willingness to participate. I look forward to hearing your talk in January. Again, if I have not yet heard from you, please confirm your participation. If there are any questions, please let me know by telephone, fax, or e-mail (stans@oilspill.state.ak.us).

encl: list of projects & presenters
draft agenda

1997 Restoration Workshop
January 23-25, 1997
Proposed Presentations on Individual Projects (FY 96 Results)

Project Number & Title		Investigator/Leader	Status
96139A2	Port Dick spawning channel	Dudiak & Dickson	Yes
96162	herring disease	Kocan et al.	Yes
96074	herring reproductive impairment	Carls	Yes
96145	cutthroat trout--life history forms	Reeves	Yes
95012	killer whale monitoring	Matkin	Yes
95064	harbor seal fatty acids	Frost	Yes
96161	harlequin duck genetics	Goatcher et al.	Yes
96142	Kittlitz's murrelet status & ecol.	Day	Yes
96159	marine bird boat surveys	Agler	Yes
96131	Chugach region clam restoration	Brown & Daisy	?
96210	PWS youth area watch	Henning	?
96149	archaeological site stewardship	Reger	Yes

1997 Restoration Workshop

Draft Agenda (11/22/96)

DRAFT

Day 1, Thursday, January 23

8:00 am	Registration
8:45	Introduction and Annual Report on EVOS Program, Announcements *Molly McCammon, Executive Director*
9:15	Trustee Perspectives *Phil Janik (USFS), Federal Trustee* *State Trustee?*
9:45	Break
10:15	Keynote Address: Natural and Social Scales in Ecosystem Management *Dr. Kai N. Lee, Center for Environmental Studies, Williams College*

Note: Following the keynote address, we begin a special session on the three ecosystem projects. Each project would be given a 2-h block of time in which to address the following topics:

-progress toward major hypotheses,
-progress in building an ecosystem model
-a preliminary synthesis of results (i.e., what is the emerging "big picture"), and
-management applications, monitoring, and future work.

It is expected that these presentations would involve a combination of project leaders and PIs and should emphasize major new results, syntheses, and future applications. What we want to avoid is a long recitation of results from each project component.

11:15	Introduction to Ecosystem Projects and Ecological Syntheses *Dr. Robert Spies, Chief Scientist*
11:30	Sound Ecosystem Assessment (SEA, /320) *Dr. Ted Cooney and others*
12:00 Noon	Buffet Lunch (in hotel)
1:15 pm	SEA, continued
2:45	Break
3:15-5:15	Alaska Predator Ecosystem Experiment (APEX, /163) *Dr. David Duffy and others*

6:00-8:00 Reception and Poster Session

Note: Posters will once again be arrayed around some appropriate space, which, ideally, will be adjacent to the room where the plenary sessions are held. The posters should remain up for the duration of the meeting.

Day 2, Friday, January 24

8:00 am Nearshore Vertebrate Predator Project (NVP, /025)
Dr. Leslie Bartels and others

10:00 Break

10:30 Panel: Perspectives on Ecosystem Projects and Research Needed by Resource Managers
Representatives of NMFS (Balsiger), ADFG, USFWS (Martin), USFS and others?

12:00 Noon Buffet Lunch (in hotel)

1:30 pm Panel: Building and Applying Ecological Models [title tentative]
Dr. Andy Gunther (moderator); [following are not confirmed] *Drs. S. Pimm (UTenn), D. Pauly (UBC), V. Patrick (SEA), D. Ainley (APEX), and M. Adkison (NVP)*

3:00 Break

Note: Following the break we begin a series of presentations on '96 project results, emphasizing projects not covered at the 1996 workshop and those that have new, especially exciting results, even if they were covered last year. There is time for 12 presentations on individual projects.

3:30-5:00 Herring Reproductive Impairment, 96074, *M. Carls*
Herring Disease, 96162, *Dr. R. Kocan*
Cutthroat Trout/Dolly Varden Life History Forms, 96145, *Dr. G. Reeves*
Chugach Region Clam Restoration, 96131 [*not confirmed*]
Port Dick Spawning Channel, 96139A2, *N. Dudiak and M. Dickson*

7:00-9:00 Brainstorming Session: Is Another Ecosystem Shift Underway?

Note: This is an informal, optional session held in one of the breakout rooms. It will be of interest primarily to APEX and SEA investigators, but is open to anyone who is interested. Ideally, some key people would be primed to offer some provocative ideas to jumpstart the discussion.

Day 3, Saturday, January 25

8:30 am	Marine Bird Boat Surveys, 96159, *B. Agler & S. Kendall* Status & Ecology of Kittlitz's Murrelet, 96142, *Dr. R. Day* Harlequin Duck Genetics, 96161, *B. Goatcher & K. Scribner* Harbor Seal Fatty Acids, 96064, *K. Frost* Killer Whale Contaminants & Genetics, 96012, *C. Matkin & E. Saulitis*
10:00	Break
10:30	PWS Youth Area Watch, 96210 [*not confirmed*] Archaeological Site Stewardship, 96149, *D. Reger*
11:10	Reactions from Peer Reviewers *Drs. Spies, Peterson, Haney, Rose, Wheeler, and Mundy*
12:10 pm	Closing Remarks (for the technical workshop) *Molly McCammon, Executive Director*
12:15	Lunch (on your own)

Note: As an experiment, we will try an afternoon session aimed specifically at general public audiences. The details are still developing, but this session will include presentations on the restoration program, the status of injured resources and services, an ecosystem approach to restoration, "scientists at work," and the Alaska SeaLife Center.

2:10	Restoration Program Overview and Injury & Recovery Update *Molly McCammon, Executive Director* *Stan Senner, Science Coordinator*
2:40	An Ecosystem Approach to Restoration *Dr. Robert Spies, Chief Scientist*
2:50	Scientists at Work: How We Do It? Why We Do It? and What Do We Learn? *a series of short presentations by project PIs and staff*
3:30	Alaska SeaLife Center *John Hendricks, Executive Director*
3:45	Panel: Questions and Answers *Molly McCammon, Robert Spies, Stan Senner, Martha Vlasoff, and other presenters*

4:30 Adjourn

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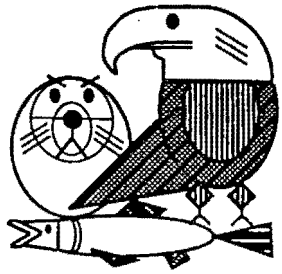

MEMORANDUM

TO: Claudia Slater/ADF&G

FROM: Molly McCammon
Executive Director

RE: Authorization: Project 97196/Genetic Structure of Prince William Sound Pink Salmon

DATE: November 22, 1996

The purpose of this memorandum is to formally authorize work to proceed on Project 97196/Genetic Structure of Prince William Sound Pink Salmon, as described in the Detailed Project Description dated August 27, 1996 and supplemented by the November 7, 1996 letter from Dr. Jim Seeb to Dr. Robert Spies. I agree with Dr. Spies's recommendation that a meeting of the PIs, science reviewers, and ADF&G fishery managers be held before the beginning of the FY 98 proposal cycle to address the reviewers' remaining concerns and questions about the project. Either Dr. Spies or Stan Senner will contact you to make meeting arrangements.

cc: Dr. Jim Seeb

Exxon Valdez Oil Spill Trustee Council
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November 22, 1996

Angelique Robertson
Office of Environmental Justice
Environmental Protection Agency Region X
1200 6th Avenue OI-085
Seattle, WA 98101

Dear Angelique:

Enclosed are the documents you requested. Please let me know if I can be of any further assistance.

Sincerely,

Molly McCammon
Executive Director

Enclosures

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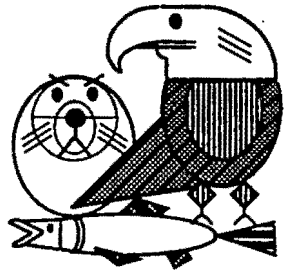


November 22, 1996

Lisa Ka'aihue, Project Manager
PWS Regional Citizens' Advisory Council
750 W. 2nd Street, Suite 100
Anchorage, Alaska 99501-2168

Dear Lisa:

Thank you for your letter of November 1st regarding possible coordination between monitoring projects supported by the PWS RCAC and the *Exxon Valdez* Oil Spill Trustee Council. It would appear to me that there is little or no overlap between these programs, and this is good, since resources are scarce and duplication would be inappropriate.

The Trustee Council's current work plan (FY 1997) does not include hydrocarbon monitoring in the water column, sediments, or mussels, and I don't see this changing in the next 2-3 years, although the specifics of our program are continually evolving. Most of the monitoring supported by the Trustee Council concerns the status of injured fish and wildlife populations (e.g., harbor seals, common murres). I have enclosed a copy of the *Fiscal Year 1997 Draft Work Plan* (the final will be out early in the new year), and there are several projects that are worth drawing to your attention:

Project Number	Content related to RCAC Interests
97191A	monitors pink salmon egg mortality in oiled and unoiled streams; explores possibility of genetic injury
97194	analyzes oil contamination in stream sediments from 1989-90 and 1995; this is a companion to project 97191A
97025	large-scale project looking at factors limiting recovery of nearshore vertebrate predators; includes analyses of hydrocarbon exposure in river and sea otters, pigeon guillemots, and harlequin ducks
97290	central data base for all hydrocarbon work sponsored by Trustee Council; will be available "on line"

Each of these projects has at least some connection to the monitoring sponsored by the PWS RCAC, and I have enclosed the detailed project descriptions for each of them. The last project, 97290, would seem especially relevant and may be an area where we should look more closely at opportunities for cooperation. If you want project descriptions for any other projects in the draft work plan, let me know. I would be happy to discuss these further with you or with the Scientific Advisory Committee.

Finally, you may be aware that the Trustee Council is sponsoring some limited shoreline cleanup work in the Chenega area in 1997. You may want to have a briefing on this subject from the Department of Environmental Conservation. Dianne Munson (269-3080) would be the contact person.

Please let me know if you want to discuss any of the above further. Thank you again for your inquiry.

Sincerely,

Stanley E. Senner
Science Coordinator

encl: (5)

cc: Molly McCammon, EVOS TC
Dr. Robert Spies, AMS
Bruce Wright, NMFS
Dianne Munson, ADEC

Regional Citizens' Advisory Council / *"Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers."*

☑ In Anchorage: 750 W. 2nd Ave., Suite 100 / Anchorage, Alaska 99501-2168 / (907) 277-7222 / FAX (907) 277-4523
☐ In Valdez: 154 Fairbanks Dr. / P.O. Box 3089 / Valdez, Alaska 99686 / (907) 835-5957 / FAX (907) 835-5926

November 1, 1996

Stan Senner
Exxon Valdez Oil Spill Trustee Council
645 G Street, Suite 401
Anchorage, AK 99501

Dear Mr. Senner:

The purpose of this letter is to solicit your help in understanding how one of our major environmental monitoring projects can be coordinated with the other environmental monitoring work that is being done by organizations such as yours. The Prince William Sound Regional Citizens' Advisory Council (RCAC) recognizes the need to avoid duplication of efforts.

First let me describe our RCAC project, the Long-Term Environmental Monitoring Program (LTEMP). LTEMP was initiated in 1993 at nine sites in Prince William Sound, Port Valdez, and the Gulf of Alaska (see attached chart). This program was conceived to help satisfy RCAC's mission which includes carrying out research designed to help understand and evaluate environmental impacts associated with oil industry activities in Prince William Sound and the Gulf of Alaska. This area has been monitored for the presence of hydrocarbons in the water column and sediment. Intertidal mussels (*Mytilus edulis*) and shallow and deep sediments have been sampled. Full descriptions of the program are contained in the 1993, 1994, and 1995 annual reports. Please feel free to contact our office if you would like a copy of any one of these reports.

The following program is what we will be asking our board to fund for fiscal year 1997-98:

Analyses

Analyses will include polycyclic aromatic hydrocarbons, alipahtic hydrocarbons (sediment only), particle grain size, total organic carbon, percent lipid determination, and gonadal index determination.

Field Sampling

Station Location	Sampling Type/Depth (meters)	Sampling Frequency
Aialik Bay	tissue	summer & winter
Alyeska Marine Terminal	tissue	summer & winter
	sediment/-72.2 m	summer & winter
Disk Island	tissue	summer & winter
	sediment/-6.7 m	summer & winter
Gold Creek	tissue	summer & winter
	sediment/-28.7	summer & winter
Knowles Head	tissue	summer & winter
	sediment/-5.4 m	summer & winter
Sheep Bay	tissue	summer & winter
	sediment/-6.2 m	summer & winter
Shuyak Harbor	tissue	summer & winter
	sediment/-7.2 m	summer & winter
Sleepy Bay	tissue	summer & winter
	sediment/-7.3 m	summer & winter
Windy Bay	tissue	summer & winter
	sediment/-5.7 m	summer & winter

Having shared with you the proposed LTEMP plan for fiscal year 1997-98, I would be very much interested in any environmental monitoring field work you have scheduled for the upcoming year, or years. If they are available, please send me copies of upcoming field work. This will enable RCAC to better coordinate the LTEMP project with other work that may be similar. Thank you.

Sincerely,

Lisa Ka'aihue

Lisa Ka'aihue
Project Manager

cc: Scientific Advisory Committee
att.

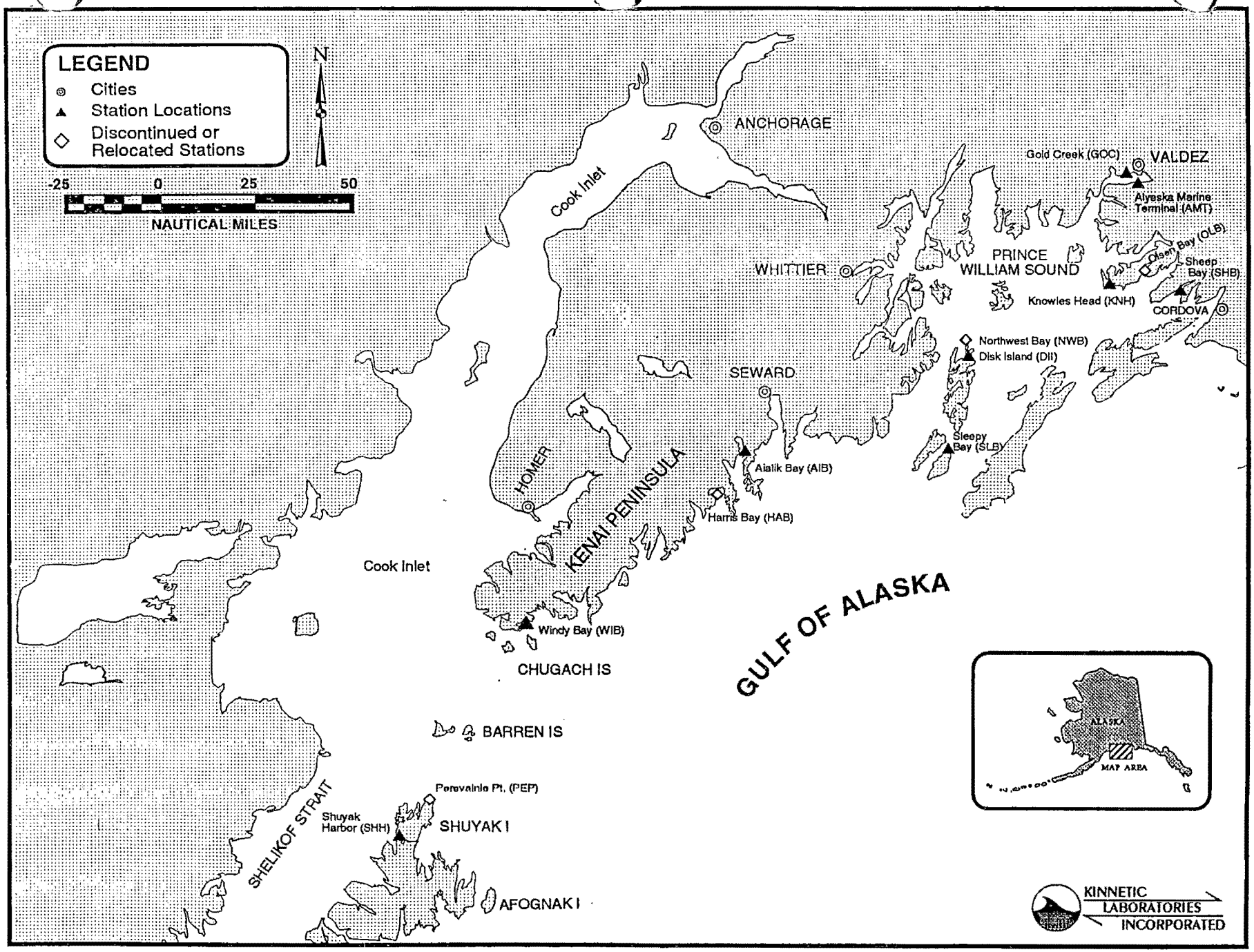
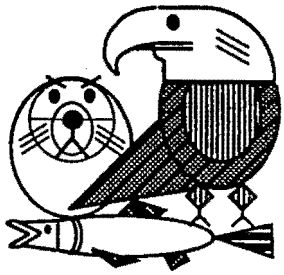


Figure 1. LTEMP Station Locations (Overall Study Area).

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



November 22, 1996

Dave Gibbons
U.S. Forest Service
709 West 9th Street, Room 831
Juneau, Alaska 99802-1628

Dear Dave:

The tentative agenda for the 1997 Restoration Workshop includes a panel on "Perspectives on Ecosystem Projects and Research Needed by Resource Managers." The workshop will be held January 23 - 25, 1997 at the Hotel Captain Cook in Anchorage. I keep forgetting to ask you whether the Forest Service would like to be represented on this panel.

The idea is that the panel members will attend the first day of the workshop (Thursday, January 23) and listen to a series of three two-hour presentations on the ecosystem projects (SEA, NVP, APEX). The management panel will then follow on the second day (Friday, January 24). I am asking that participants briefly address two questions (total of ~ 10 min): (1) What kinds of research are needed to enable your agency to fulfill its mandates related to marine/coastal habitats, fish, and wildlife in the oil-spill area; (2) What is your reaction to what you heard about the Trustee-sponsored ecosystem projects? How do they relate to your mission? Would you suggest different or additional questions or emphases?

Currently, I have commitments from Jim Balsiger, head of the NMFS Alaska Fisheries Science Center, and from John Martin, manager of the Alaska Maritime National Wildlife Refuge. The Alaska Department of Fish and Game also will be represented (person yet to be determined). Would the Forest Service like to be on this panel? If so, would you let me know who it will be?

I am away during the week of the 24th (Thanksgiving week), but would like to nail this down during the first week of December. Thank you for your consideration.

Sincerely,

Stanley E. Senner
Science Coordinator

cc: Ken Holbrook, USFS
Bill Hauser, ADFG

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178

November 20, 1996

Joseph Neubauer
GeoCHEM
500 West Potter Drive Suite 201
Anchorage Alaska 99518-1145

Dear Mr. Neubauer:

Thank you for the information you provided with your November 6, 1996 letter. In order to provide you with a better understanding of the *Exxon Valdez* Oil Spill Trustee Council's mission and responsibilities, I have inclosed a copy of our most recent Annual Report. I have also included the Restoration Plan that was adopted by the Council in November 1994.

As provided by the court approved settlement that governs the Council's actions, restoration funds must be used ". . . for the purposes of restoring, replacing, enhancing, or acquiring the equivalent of ***natural resources*** injured as result of the Oil Spill and the reduced or lost ***services*** provided by such resources . . ." That is, settlement funds are to be used exclusively for the restoration of injuries resulting from the *Exxon Valdez* oil spill and are not available for expenditure on prospective oil spill preparedness.

Thank you again for your interest in the Trustee Council's restoration program. If you have further questions about the Trustee Council process or would like additional information, please don't hesitate to contact me.

Sincerely

Eric F. Myers
Director of Operations

enclosures

efm/raw

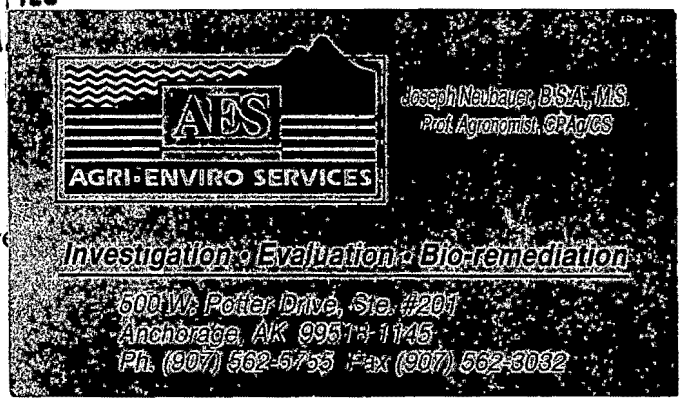
GeoCHEM INCORPORATED

Joseph Neubauer
President

500 West Potter Drive, Suite 201
Anchorage, Alaska 99518
(907) 562-5755
Fax (907) 562-3032

November, 6 1996

Exxon Valdez Oil Spill Trustee Council
Attn: Mr. Eric Myers
645 G Street, Suite 401
Anchorage, AK 99501



Re: Oil Spill Control Chemical Products of Inter

Dear Mr.Myers:

GeoCHEM,Inc. would like to introduce to your company a number of new products that we feel are superior to any other oil spill control chemicals or systems available in Alaska today. We feel that these products will be of interest to you since it deals with various oil spill application.potentials.

I am a professional agronomist and as a result believe that my technical background & the practical experiences at Prudhoe Bay as a former ARCO & Alyeska employee (North Slope in general) and the entire pipeline corridor will add credence to the accuracy of the following statement. Once the hydrocarbon source enters the **active layer of the tundra,** there was really **nothing** to this day, that **can** or **could** have been **used** to stop the hydrocarbon source from entering the active layer of the tundra unless the spill occurred during the winter months on frozen soil or tundra. Based on the "**Elastol Technology**" the above statement does not apply since effective control measures are **now** available.

GeoCHEM Inc. would be willing to come to your office to show & demonstrate the "**Oil Spill Control System**" that will indeed prevent the entry of hydrocarbons into the soil (product must be on the site or available for quick response to the affected and impacted area created by the spill).

It would be unreasonable to assume that **no oil will ever enter** into the soil if a hydrocarbon spill occurred (there is always a time lapse between the actual oil spill and the initiation of oil spill control measure) ..

For your information it has been calculated that if the **Elastol** product **would have been** on the EXXON tanker , the EXXON spill could have been controlled with an expenditure of not more than a million dollars in comparison to several hundred million dollars.

In order to minimize the deleterious affects of the oil or any other hydrocarbon source on the vegetation a colloidal encapsulant namely NK-3 material is available & exists today. The use of NK-3 would significantly minimize the deleterious effects of the hydrocarbon on the vegetation in case that the oil penetrated the soil substrate. The **Elastol** will jell the hydrocarbon source and effectively help prevent the entry of the oil into the active layer of the soil. The NK-3 on the other hand if applied as soon as possible after Elastol clean up will help eliminate the deleterious effects of the hydrocarbon that have entered the soil complex prior to Elastol application For your

information the NK-3 is a non phytotoxic colloidal encapsulant that is **non toxic** to plants, microbes, men,land and sea life.

The manufacturer, GTA,has a number of formulations of which only **three (3) formulation** have practical use in Alaska . These three (3) formulations are described as follows:

TAC-1

A sorbent designed for use on volatile fuel spills when the objective is to quickly minimize fire hazard as well as clean- up the spill.

Specifications:

* Non- toxic,comprised of food grade materials and kiln died sawdust.
* Biodegradable

Benefits:

* Immobilizes spilled hydrocarbons
* Eliminated vapor hazard from gasoline and other volatile
* Can be easily collected for disposal

Application:

* Applied directly to the spill by hand or blower
* Will absorb approx. 3-4 lbs of fuel for each pound of **TAC-1**
* Does not mix with water. No oily sheen will exist on the water coming into contact with the sorbent mass.

Disposal:

* **Tac-1 /liquid mass** is cohesive and does not leach in contact with water nor does the liquid hydrocarbon drain from mass under pressure.
* Transportation of the **TAC/liquid mass** is safe because of suppressed vapor and cohesiveness.
* **Tac1/liquid mass** is readily incinerated (low cost approved EPA incinerators can be made available). High BTU low ash incineration.

Availability:

* Available in 25 lb bags, 6 gallon pails,30 gallon (75 lb) drums or larger sizes to suit customer requirements.

ELASTOSORB

Elastosorb absorbs and consolidates spilled hydrocarbons into a rubbery cohesive mass. The spill residue does not leak, or drain in handling, or in storage under pressure. It does not leach in contact with water. The material weighs 13 lbs/cu.ft., it is non-toxic and non reactive and is a compound consisting of food grade polymers and natural cellulose materials.

Where To Use:

* Parking areas, automotive repair areas, commercial buildings, hangers, marine engine repair shops , industrial shops, or any other area subject to oil spills.

DISPOSAL:

*Spill residue is a rubbery cohesive mass which does not drain inhandling or storage under pressure. Since **Elastosrb** burns with high BTU value and very little ash ,and since the spill residue is a relatively homogeneous mass,it is ideal for incineration or as a fuel for energy production.

HANDLING & STORAGE:

* Re-seal bag or any other storage container and store in dry area.

.....

LIQUID ELASTOL

Liquid Elastol is a new technology for removing both surface oil and suspended oil from water. The efficiency of hydrocarbon control and the recovery is significantly increased because the **Liquid Elastol** treated oil does not disperse or emulsify. **Liquid Elastol** also increases the efficiency of most oil/water separation systems..

* The surface oils removal is enhanced because the treated oil becomes cohesive and holds together when it is stretched.

* **Liquid Elastol** acts as a liquid filter for removing suspended oil from water. As the oil in water makes contact with Liquid Elastol the oil transfers from the water to the **Liquid Elastol** (hydrocarbons have a strong **affinity** to Elastol).

APPLICATIONS:

For Surface OIL

* **Liquid Elastol** is applied directly to the surface of oil with slight mixing, (distribution of Elastol) the oil will become cohesive. Drum or disk skimmers are very effective in removing the treated oil since its cohesiveness increases as it is stretched. **Vacuum cleaning** can be accomplished **without significant water pickup**.

For Suspended OIL

* To remove the suspended oil , **Liquid Elastol** is mixed with the contaminated water. A commonly used method is an air sparge in the bottom of the tank containing the contaminated water. After completion of air sparging the **Liquid Elastol/oil mix** is allowed to rise and then removed from the surface.

TREATMENT RATES: (Surface Oil) Per Gallon **Of Liquid Elastol .**

(1 gallon of Liquid Elastol will bind the following gallons of hydrocarbons):

* **Gasoline :**	13 gallons
* **Diesel :**	34 gallons
* **Medium Oil :**	84 gallons
* **Heavy Oil :**	150 gallons

Note:The amount of **Liquid Elastol** to use is dependent on the type of application.

EXAMPLE: 125 gallons of water contaminated with 2000 ppm of oil requires 400 ml of **Liquid Elastol** , 15 minutes sparge time and 5 minutes rise time. Application depending on type of application intended will be supplied by the manufacturer & its distributor/agent.

In order to demonstrate the functions and application potentials of the above mentioned formulations, and the other material such as Water Structures & Geoweb, GeoCHEM is ready & willing to meet with you and your group at your earliest convenience.

I took the liberty to attach the introductory letter on **"Water Structure" as well as additional literature** for your information & file. . Hope hearing from you soon.

Sincerely,

Joseph Neubauer

Joseph Neubauer
Pres. GeoCHEM,Inc.

File:Exxon Valdez Trustee Council Intr. To Elastol Oil Spill Control Chem.GeoAK.Joe
Attachments

GeoCHEM
INCORPORATED

November-December 1996

Exxon Valdez Oil Spill Trustee Council
Mr. Eric Myers
645 G Street, Suite 401
Anchorage, AK 99501

Re: *Waterstructure* "An Alternate System To Hydrocarbon Or Flood Water Control"

Dear Mr. Myers:

By way of enclosed literature, GeoCHEM, Inc. ,as the Alaska and Washington State distributor of "*Waterstructures*", would like to introduce the " ***Waterstructure System*** to you and your company.

Waterstructures revolutionizes the temporary water control such as: Stream diversions, flood control, hazardous waste containment, dams, prevents levee over-topping, silt barriers, and temporary water storage are just a few applications of *WATERSTRUCTURES*, an exciting new method of ***controlling water with water.***

Waterstructures are easy to install(erect) and they deliver impressive results at a fraction of the cost of earthen dams, sandbags or sheet piling and others. *Waterstructures* are lightweight, easy to transport and can be re-used over and over again. **In addition the installation would be performed in complete compliance with current Federal and State water quality control laws.** Once in place the water-filled dam(Waterstructure) would divert flood waters, facilitate effective de-watering of a job site and would prevent silt from entering a live stream channel. In addition, the installation would be performed in complete compliance with current Federal and State water quality control laws. We know of no alternative method of flood control or for the diversion and de-watering of a job site within a live stream channel that is as efficient, cost effective and in complete compliance with existing environmental statutes

There have been hundreds of Waterstructures installed over the past several years in the United States and throughout the world. **Over 6,000 ln. feet have been installed by GeoCHEM so far in Washington State this year.**

If you are faced with temporary water control challenges we suggest you first evaluate *Watertructures.* It is an innovative concept that saves valuable time on labor and best of all it is *ecologically safe.*

500 West Potter Drive, Suite 201, Anchorage, Alaska 99518 (907) 562-5755 Fax (907) 562-3032

The enclosed literature pertains to the design concepts, applications potentials ,criteria, size availability. In addition you will also find a report entitled **"Use Of Waterfilled Cofferdams For Shore Protection During *Remediation Activities*".**

As per the enclosed literature the" ***Waterstructure"*** is available in 1 to 6 foot height. ***Waterstructures*** above 6' height can be custom manufactured depending on height requirement(s).

Cold resistance characteristics, inherent to the outer and inner tubes of the ***"Waterstructure",*** permits exposure during the winter months provided certain precautions and provisions are made to guard against the expansion of frozen water. Please contact a **GeoCHEM Technical Representative** for precautionary measures against ice expansion concerns.

THE CONCEPT

Waterstructure is a patented idea that combines a given number of polyethylene tubes within a woven master tube with the available water supply. In other words the "inner" tubes, contained by an outer "master" tube, are pumped full of water simultaneously. Counter friction between the master and the inner tubes results in a stable , non-rolling "Wall" of contained water, which adjusts automatically to bottom terrain as the ***Waterstructure*** deploys. Within minutes, an impervious ,solid ***Waterstructure*** dam is formed.

THE APPLICATION

Waterstructures is lightweight, easy to handle and can be used in virtually any location. The on-site requirements are just a portable pump and the usually abundant local water supply. This means the ***Waterstructures*** are ideal for water control projects such as stream or lake bed construction diversion, coffer damming, or environmental pollution confinement and silt control. It also provides fast effective relief for tougher application such as mud slides, hazardous waste control and flooding. Ideal for preventing over-topping of levees which is a number one cause of levee failure.

In addition, ***Waterstructures*** can be used for temporary water storage. In dryer seasons or locales, Water Structures work wonders as a means of temporary "tankage" for municipalities ,livestock, on-site construction projects and fire water control reserves.

WATERSTRUCTURES

Are available in sizes ranging from 1 to 6 feet height. ***Waterstructures*** can handle almost any water control project on almost any terrain. Larger ***Waterstructures*** depending on height **requirements** are made to order only.

Waterstructures provide excellent results over a wide range of temporary water control projects. From labor and cost saving aspects alone, ***Waterstructures*** are clearly the method of choice. Add complete portability, ease of installation and the fact that it is completely environmentally clean & safe.

MEETING THE CHALLENGE

*The cost effective **Waterstructures** have a wide range of applications:*

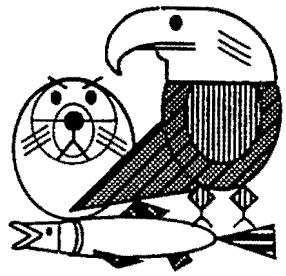
* *Bank Revetment*
* ***Stream & River Diversions***
* *Temporary Dams*
* ***Flood Control***
* *Dam & Levee Over-topping*
* ***Soil Erosion Control***
* *Environmental Silt Control*
* ***Fish Habitat Protection***
* *Fish Habitat Restoration*
* ***Coffer Damming***
* *90% Faster Than Sandbagging*
* ***Sediment Check Dam(s)***
* *De-Watering Dikes*
* ***Emergency Water Storage***
* *Chemical Spill Containment*
* *Oil Spill Containment*
* ***60-80% More Economical*** *Than Conventional Labor Methods.*
* ***Extremely Friendly To*** *The Environment.*
* ***Easy To Transport And*** *Install.*
* ***Completely Re-Useable*** *In Most Applications.*
* ***"Tankage" Reserves For*** *Multiple Applications*
* ***De-Watering Channels***
* *Boom Protection Around Remediation Or Chemical Waste Sites*

*If I may be of any further assistance by answering questions submitting price quotations or supplying the US Corps of Engineers with references additional Water Structure literature (Users Guide),please feel free to give me a call at 907-562-5755 or use your request via the attached **Fax Reply Form.** Utilizing Water Structures to "Control Water with Water" is practical, efficient, productive and economical.*

Sincerely,
Joseph Neubauer
President

File: Valdez Oil Spill Trustee Council Introd.To Watstr.-GeoAK.Joe
Attachments

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



November 20, 1996

To Whom It May Concern:

Please be advised that Dr. Kai N. Lee is traveling on behalf of the State of Alaska and the U.S. Government, and, in that capacity is entitled to receive government rates for airfare and accommodations.

He will be working on government business until September 30, 1997. Any questions relating to this matter should be directed to:

Executive Director
Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street Suite 401
Anchorage AK 99501-3451
(907) 278-8012

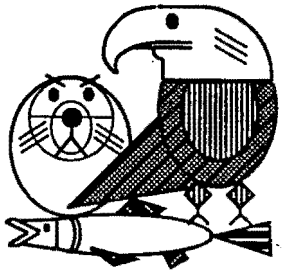
Thank you for your cooperation.

Sincerely,

Molly McCammon
Executive Director

mm/raw

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



November 20, 1996

Dr. Kai N. Lee
Center for Environmental Studies
Williams College
P.O. Box 632
Williamstown, Massachusetts 01267

Dear Dr. Lee:

Stan Senner has kept me posted on the discussions about your participation in the 1997 *Exxon Valdez* Oil Spill Restoration Workshop, and I am delighted to learn that you are interested in and available for this meeting. My purpose in writing now is to extend you a formal invitation and see if we can settle a few more of the details about your visit.

Your suggestion that you come to Anchorage a day early is excellent. I suggest that you plan on traveling on January 21, so that you have a full day (the 22nd) here in advance of the workshop on the 23rd. There will not be much underway in the field at that time (and we'll be in full-fledged winter), but we can arrange visits with some of the researchers based in Anchorage. Some of them will be engaged in laboratory work here, while others could at least show you results of their field programs.

We also may arrange dinner on Wednesday night, January 22, with Jim Ayers, who is Chief of Staff to Governor Tony Knowles and former Executive Director of the *Exxon Valdez* Oil Spill Trustee Council. Jim was the person who brought the adaptive management approach to the restoration program and is very familiar with your work. There may even be a possibility of a visit with Governor Knowles, if he in Anchorage during the time of the workshop. Finally, our Chief Scientist, Dr. Robert Spies, and panel of outside scientific reviewers, including Drs. Pete Peterson and Phil Mundy (perhaps you know them) will be here, and we will want to arrange some time together.

In regard to the workshop itself, I have enclosed a new draft of the agenda. We have your keynote address listed for 10:15 a.m. on the morning of the 23rd. However, Stan and I have discussed whether it might be to everyone's advantage to place you later in the program, e.g., Friday morning, so that you will have had the benefit of listening first to presentations on the three large-scale ecosystem projects we have underway. Although it may be unconventional to not start with the keynote address, there should

not be attrition in the audience at that point, and the extra day of listening might help you a great deal. We can go either way and need to know which you prefer.

Your fee of $2500 (plus airfare, hotel, and per diem) is acceptable to us. In order to pay you, however, we will need to put you on contract to Applied Marine Sciences (AMS), the private consulting firm which handles arrangements with reviewers and other advisors outside of government agencies. Our Chief Scientist, Dr. Robert Spies, is President of AMS. There is a bit of paperwork involved, but nothing too onerous. If this is acceptable to you, you will hear directly from Ms. Sue Chase at AMS.

Finally, I trust that you would be able to stay through the close of the workshop on Saturday the 24th and return on Sunday the 25th. This will lower the airfare substantially. During this time, would you want to consider any additional presentations, e.g., at the University of Alaska Anchorage, possibly at the Institute of Social and Economic Research? We would be delighted to have you at the workshop the entire time, but we also are eager to get good mileage out of your time as well as to expose you to people here in your field. If you would like to visit any local "attractions" while you are here (e.g., the Alaska SeaLife Center, which is under construction at Seward), please let us know.

Please let me or Stan know your preferences and reactions to the questions above. Once we get these basics settled, we can proceed with airline reservations and other arrangements. Thank you again.

Sincerely,

Molly McCammon
Executive Director

encl: (1)

cc: Robert Spies & Sue Chase, AMS

1997 Restoration Workshop

Draft Agenda (11/18/96)

DRAFT

Day 1, Thursday, January 23

8:00 am	Registration
8:45	Introduction and Annual Report on EVOS Program, Announcements *Molly McCammon, Executive Director*
9:15	Trustee Perspectives *Phil Janik (USFS), Federal Trustee* *State Trustee?*
9:45	Break
10:15	Keynote Address: Natural and Social Scales in Ecosystem Management *Dr. Kai N. Lee, Center for Environmental Studies, Williams College*

Note: Following the keynote address, we begin a special session on the three ecosystem projects. Each project would be given a 2-h block of time in which to address the following topics:

-progress toward major hypotheses,
-progress in building an ecosystem model
-a preliminary synthesis of results (i.e., what is the emerging "big picture"), and
-management applications, monitoring, and future work.

It is expected that these presentations would involve a combination of project leaders and PIs and should emphasize major new results, syntheses, and future applications. What we want to avoid is a long recitation of results from each project component.

11:15	Introduction to Ecosystem Projects and Ecological Syntheses *Dr. Robert Spies, Chief Scientist*
11:30	Sound Ecosystem Assessment (SEA, /320) *Dr. Ted Cooney and others*
12:00 Noon	Buffet Lunch (in hotel)
1:15 pm	SEA, continued
2:45	Break
3:15-5:15	Alaska Predator Ecosystem Experiment (APEX, /163) *Dr. David Duffy and others*

6:00-8:00 Reception and Poster Session

Note: Posters will once again be arrayed around some appropriate space, which, ideally, will be adjacent to the room where the plenary sessions are held. The posters should remain up for the duration of the meeting.

Day 2, Friday, January 24

8:00 am Nearshore Vertebrate Predator Project (NVP, /025)
Dr. Leslie Bartels and others

10:00 Break

10:30 Panel: Perspectives on Ecosystem Projects and Research Needed by Resource Managers
Representatives of NMFS (Balsiger), ADFG, DOI, USFS and others?

12:00 Noon Buffet Lunch (in hotel)

1:30 pm Panel: Building and Applying Ecological Models [title tentative]
Dr. Andy Gunther (moderator); [following are not confirmed] *Drs. S. Pimm(UTenn), D. Pauly(UBC), V. Patrick (SEA), D. Ainley (APEX), and M. Adkison (NVP)*

3:00 Break

Note: Following the break we begin a series of presentations on '96 project results, emphasizing projects not covered at the 1996 workshop and those that have new, especially exciting results, even if they were covered last year. There is time for 12 presentations on individual projects.

3:30-5:00 Herring Reproductive Impairment, 96074, *M. Carls*
Herring Disease, 96162, *Dr. R. Kocan*
Cutthroat Trout/Dolly Varden Life History Forms, 96145, *Dr. G. Reeves*
Chugach Region Clam Restoration, 96131 [*not confirmed*]
Port Dick Spawning Channel, 96139A2, *N. Dudiak and M. Dickson*

7:00-9:00 Brainstorming Session: Is Another Ecosystem Shift Underway?

Note: This is an informal, optional session held in one of the breakout rooms. It will be of interest primarily to APEX and SEA investigators, but is open to anyone who is interested. Ideally, some key people would be primed to offer some provocative ideas to jumpstart the discussion.

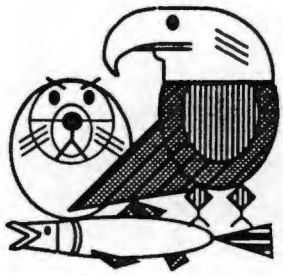
Day 3, Saturday, January 25

8:30 am	Marine Bird Boat Surveys, 96159, *B. Agler & S. Kendall* Status & Ecology of Kittlitz's Murrelet, 96142, *Dr. R. Day* Harlequin Duck Genetics, 96161 [*not confirmed*] Harbor Seal Fatty Acids, 96064, [*not confirmed*] Killer Whale Contaminants & Genetics, 96012, *C. Matkin & E. Saulitis*
10:00	Break
10:30	PWS Youth Area Watch, 96210 [*not confirmed*] Archaeological Site Stewardship, 96149 [*not confirmed*]
11:10	Reactions from Peer Reviewers *Drs. Spies, Peterson, Haney, Rose, Wheeler, and Mundy*
12:10 pm	Closing Remarks (for the technical workshop) *Molly McCammon, Executive Director*
12:15	Lunch (on your own)
1:30	Session for General Public

Note: As an experiment, we will try an afternoon session aimed specifically at general public audiences. The details are still developing, but this session will include presentations on the restoration program, the status of injured resources and services, an ecosystem approach to restoration, "scientists at work," and the Alaska SeaLife Center.

3:45	Panel: Questions and Answers *Molly McCammon, Robert Spies, Stan Senner, Martha Vlasoff, and other presenters*
4:30	Adjourn

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



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FAX COMPLETE

To: Dr. Lee Dr. Spies Number:

From: Stan Senner Date: November 20, 1996

Comments: Total Pages: 12

HARD COPY TO FOLLOW yes

Document Sent By: Kari Dill

3/27/96

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*** MULTI TRANSACTION REPORT ***
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Exxon Valdez Oil Spill Trustee Council
Restoration Office
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MEMORANDUM

To: Chris Haney, Phil Mundy, Pete Peterson, George Rose, and Polly Wheeler

From: Stan Senner, Science Coordinator

Subject: Responding to Criticisms of EVOS Science

Date: November 19, 1996

I have enclosed two items for your information. First, Molly McCammon has submitted a letter to the editor of BioScience in reply to Wiens' paper, "Oil, Seabirds, and Science." This was just submitted, so we do not yet know whether they will run it and in what form. Second, Molly had asked Bob Spies to make recommendations about how we, collectively, should respond to criticisms of EVOS science. I have enclosed Bob's letter to Molly.

As always, if you have comments or questions, please let me know. I look forward to seeing you in January.

encl: Molly McCammon's letter, 11/14/96 & Wiens' BioScience article
Bob Spies' letter, 11/03/96

cc w/encl: Robert Spies
Molly McCammon

APPLIED
marine
SCIENCES

November 3, 1996

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

Dear Molly,

As you requested I have with the help of Stan Senner, Bruce Wright, Jeep Rice, and Andy Gunther formulated some suggestions for more effectively communicating results from our scientific program and explaining how we have pursued our goals and why. As you are aware, there are several articles that have appeared or are about to appear in the semi-technical or technical literature about scientific studies in the wake of the *Exxon Valdez* oil spill:

1. Marguerite Holloway, "Sounding out science ," Scientific American, October 1996

2. John Wiens, "Oil, seabirds and science, " Bioscience 46, 587-597. September 1996

3. Robert Paine et al., "Trouble on oiled waters, " Annual Review of Ecology and Systematics, 27, 197-235. in press.

These articles contain valuable comments and criticisms of the process, but two authors were not very familiar with our program and either made mistakes (Bob Paine) or were somewhat superficial (Marguerite Holloway) in their treatments. John Wiens is clearly a partisan in Exxon's corner, although he too makes some points worth considering. All of these articles are focused on the damage assessment that by-and-large ended in 1993. Developments since then are hardly mentioned. We need to fill in this gap and correct some of the impressions formed by the above articles. Our efforts should be directed towards positive developments and new information on natural resources that will be the legacy of this process. There is a variety of outstanding and important studies now occurring. As the P.I.s continue to publish there will be a ground swell of new, useful and interesting information, and the criticisms of the NRDA science program will fade. However, that will not happen for several years; we need something in the meantime.

While there are several different arenas in which judgments about the scientific program will be rendered, I see the arena of **scientists discussing science policy** as clearly one of the most important. We should define the motivation and value of our program, rather than let others, some of whom have only superficial knowledge, define it for us.

Timing is an important element. We have been waiting until the program was more mature, but in light of the above articles we should act before silence is taken as acquiescence or

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opinion is completely set. It is clearly time to undertake a major effort to explain the necessity and value of our scientific program, especially the increased understanding of natural resources.

Given the above framework, here are some ideas as to how to proceed:

1. We need to respond to the editors of these journals with letters when inaccuracies or inappropriate conclusions are reached. Your letter to Scientific American is a good example of this strategy.

2. Expansion of our website on the internet to provide more information and lists of publications would be very useful. I understand that the DNR project will be doing more of this in the near future.

3. We need a major article in Science, Bioscience or some comparable technical magazine or journal that lays out some of the motivations, major themes and positive aspects of the scientific program. This article would acknowledge and address some of criticisms that have been made to date, although I believe that we should focus mainly on all the great things that are now emerging from our studies. I have attached a preliminary outline of an article designed to do this.

4. We also need a major article in a prominent national publication that summarizes the findings from the damage assessment, much as was done with the introductory chapter to the 1993 Symposium, but expands and updates the general findings.

5. We need to consider presenting general overview papers at some carefully selected national meetings. The Annual Meeting of the American Association of the Advancement of Science would be a good forum; the annual meeting of the Ecological Society of America would be another.

6. We should also do everything possible to encourage our P.I.s to publish their work in the open peer-reviewed literature.

7. We should also consider inviting selected P.I.s or others to pull together in a review-like fashion all of the information on pink salmon, herring, seabirds, etc. and put it into perspective relative to what was known before the spill about these resources and to how they were managed. An appropriate forum for this would be the 10th anniversary symposium volume.

I do not consider the effort outlined above as a substitute for synthesis of the information, for example within SEA, or modeling on the whole ecosystem level. Rather it is presenting the science in the context of it usefulness to policy; why we did what we did and what we found or expect to see as a result of our efforts.

I would be happy to further discuss the contents of this letter at your earliest convenience.

Sincerely,

Robert B. Spies
Chief Scientist

cc: S. Senner
A. Gunther
J. Rice
B. Wright
J. Piatt

The Scientific Legacy of the *Exxon Valdez* Restoration

(An outline for a major summary of the scientific program)

I. Introduction

A. Objective: To describe the scientific program: purposes, evolution, major scientific accomplishments, and lessons helpful in the future assessments of large-scale disruptions of coastal ecosystems.

B. Major Themes:

1. We have added a large increment to knowledge of natural resources in the Alaskan coastal environment.

2. The knowledge gained has enabled concrete improvements in management of fisheries (and some other species) to occur.

3. Lessons learned about the process of building a rational scientific program.

4. Effects of litigation on science: damage assessment was vigorously pursued. Lack of baseline data has profound implications for certainty about injury; necessity of piecing together various kinds of data to determine injury, which made the damage assessment program more expensive.

5. Ecosystem approach works well now, but such an approach has never worked well in the wake of the spill.

6. Peer review was quite good all during the process.

7. Ecosystem approach as a tool for breaking down interagency barriers.

8. The Trustee Council process worked best when independent staff ran the joint program.

9. Science driven by management and science driven by litigation are different.

10. Gained knowledge about spill affects in subarctic environment with abundant wildlife.

11. Importance of public participation to have an acceptable program.

C. Background on major phases of the scientific program

1. damage assessment--1989-1991, litigation driven, put together quickly to investigate the largest U.S. oil spill over a remote area of thousands of square miles. Many studies; time to get the federal and state government to cooperate on investigating damage.

2. clean-up-1989-1991 not under the preview of the Trustee Council. Decisions were made especially with regard to sensitivity of hatcheries, salmon streams, loss of mussel beds as food resources.

3. Restoration-1991-2001-track recovery, aid management of resources, and shift towards a broader ecosystem-level approach to resources.

D. There have been major criticisms leveled at the program, some are justified and others are incorrect and probably mainly reactions to the damage assessment phase, which was by and large over by 1993. There is a natural lag since the increased emphasis on ecosystem dynamics takes time to bear fruit --as peer reviewed articles appear in the scientific literature.

II. Much has been learned about the populations of valuable resources during the spill. Elaborate on the basis of the following examples:

A. the oceanography of PWS--useful for predicting influence of the climate and other factors on marine productivity.

1. A 3-d ocean state model with eddy diffusion has been developed that explains the circulation of PWS.

2. a phytoplankton bloom model that relates wind stress to Ekman-mixing, the mixed layer depth, light and. in turn, bloom dynamics. This model has accurately predicted the development, intensity and duration of the bloom in PWS in 1995.

B. salmon--

1. a near-real time genetic stock identification program for sockeye salmon and development of a hydroacoustic survey technique for assessing the size of the mixed stock in Upper Cook Inlet to aid in management.

2. run reconstruction model built for PWS pink salmon--the first time that a quantitative model of stock specific harvest history has been possible. (run reconstruction project)

3. the most detailed studies on prey, feeding and growth, of juvenile pink salmon in the sound. The studies have established that hatchery-released pink salmon suffer their largest losses within two weeks of release, and has described prey overlap.

4. the coded wire tagging program made it possible to more easily achieve escapement goals for pink salmon in streams of western Prince William Sound since 1990. The coded wire tag study also documented a significant amount of wandering (straying) between streams in PWS, and its existence allowed a significantly greater precision in the management of the pink salmon resource and this was increased yet again by the installation of heaters that have allowed placement of thermal marks on every single hatchery produced fish in PWS. This is an invaluable tracer for studies of salmon growth and survival in the marine environment.

4. Liminological investigations of Skilak Lake have uncovered a relationship between amount of holdover zooplankton (in the spring) and survival of sockeye fry that appears to provide a mechanic basis for the cycling of sockeye salmon populations in glacial lake systems in Alaska. This is a major breakthrough.

C. Herring--major advances are being made in defining stocks in the spill area using a variety of genetic techniques. In addition, transport, growth, predation on and over winter survival of juvenile salmon is being intensively studied in support of development of a stock recruitment model.

D. Marbled Murrelets--More knowledge about marbled murrelets has been gained since 1990 than existed before the spill. This includes information on nesting habitat, foraging and methods of monitoring. this knowledge has directly benefited the protection of habitat throughout the spill area.

III. Lessons Learned

A. Size and cost of the program: due to lack of baseline information, influence of the litigation--need to build a credible case. What was the alternative? Trustees would have been severely criticized if they had not thoroughly investigated damages from the largest oil spill in US history. Given the lack of baseline information.

B. The future of EVOS Trustee Council science program.

1. The possible use of the restoration reserve as a perennial source of funding for long-term ecosystem studies.

2. Possible interrelationships with other ecosystem programs to document the controlling ecological factors on valued marine resources in the northern Gulf of Alaska.

Exxon Valdez Oil Spill Trustee Council

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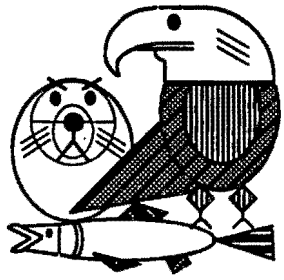

MEMORANDUM

To: Restoration Work Force

From: Molly McCammon
Executive Director

Date: November 19, 1996

Subj: RWF Meeting

Just a reminder, there will be a Restoration Work Force meeting tomorrow at 9 a.m. For those of you in Juneau, you will be contacted in your respective offices as Traci will be in Anchorage. Also, there will be a potluck at the Restoration Office following the meeting. Hope you plan on attending.

mm/raw

Exxon Valdez Oil Spill Trustee Council
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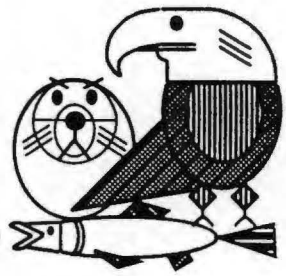

FAX COVER SHEET

To: Restoration Work Force

From: Molly McCammon Date: Nov. 19, 1996

Comments: Total Pages: 2

Please forward

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
Claudia Slater/Bill Hauser
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Piper, Ernie
Rice, Bud
Spies, Bob
Thompson, Ray
Wright, Bruce
Sullivan, Joe

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8/7/96

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	[16] 2672450	RITA MIRAGLIA
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	[18] 2672474	SULLIVAN-SLATER
	[19] 7863636	L.BARTELS
	[20] 7863350	C.BERG
	[21] 2572517	B.RICE
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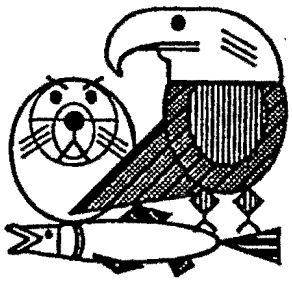

MEMORANDUM

TO: Trustee Council

THROUGH: Molly McCammon
Executive Director

FROM: Traci Cramer
Traci Cramer
Administrative Officer

DATE: November 18, 1996

RE: Financial Report as of October 31, 1996

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

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

Liquidity Account Balance	$77,226,043	
Less: Current Year Commitments (Note 5)	$23,436,225	
Plus: Adjustments (Note 6)	$427,610	
Uncommitted Fund Balance		$54,217,428
Plus: Future Exxon Payments (Note 1)	$350,000,000	
Less: Remaining Reimbursements (Note 3)	20,000,000	
Less: Remaining Commitments (Note 7)	$48,805,734	
Total Estimated Funds Available		$335,411,694
Restoration Reserve		$35,996,170

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

attachments

cc: Agency Liaisons
Bob Baldauf

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

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

Received to Date	$550,000,000
Future Payments	$350,000,000

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 $298,005.

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

4. Fees - CRIS charges a fee of 10% for cash management services. Total paid since the last report is $29,801.

5. Current Year Commitments - Includes $1,570,600 for the Chenega-Area Shoreline Residual Oiling Project, $66,000 for KAP 103, $110,500 for KAP 115, $73,500 for KAP 135, $2,540,000 for KEN 54 and the following land payments.

Seller	Amount	Due
Seal Bay	$3,075,625	November 1996
Akhiok-Kaguyak	$7,500,000	September 1997
Koniag, Incorporated	$4,500,000	September 1997
Shuyak	$4,000,000	October 1997

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

	Interest	Lapse
United States	$29,043	$0
State of Alaska	$398,567	$0

7. Remaining Commitments - Includes the following land payments.

Seller	Amount	Due
Shuyak	$16,000,000	October 1998 through 2001
Shuyak	$11,805,734	October 2002
Koniag, Incorporated	$4,500,000	September 1998
Koniag, Incorporated	$16,500,000	September 2002

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STATEMENT OF REVENUE, DISBURSEMENT, AND FEES
EXXON VALDEZ OIL SPILL JOINT TRUST FUND
As of October 31, 1996

	1994	1995	1996	To Date 1997	Cumulative Total
REVENUE:					
Contributions: (Note 1)					
Contributions from Exxon Corporation	70,000,000	70,000,000	70,000,000	0	550,000,000
Less: Credit to Exxon Corporation for clean-up costs incurred					(39,913,688)
Total Contributions	70,000,000	70,000,000	70,000,000	0	510,086,312
Interest Income: (Note 2)					
Exxon Corporation escrow account					831,233
Joint Trust Fund Account	3,736,000	5,706,666	3,963,073	298,005	15,677,744
Total Interest	3,736,000	5,706,666	3,963,073	298,005	16,508,977
Total Revenue	**73,736,000**	**75,706,666**	**73,963,073**	**298,005**	**526,595,289**
DISBURSEMENTS:					
Reimbursement of Past Costs: (Note 3)					
State of Alaska	25,000,000		3,291,446		86,559,288
United States	6,271,600	2,697,000	0		69,812,045
Total Reimbursements	31,271,600	2,697,000	3,291,446	0	156,371,333
Disbursements from Liquidity Account:					
State of Alaska	44,546,266	41,969,669	43,340,950	0	154,945,198
United States	6,008,387	48,019,928	31,047,824	0	100,502,520
Transfer to the Restoration Reserve			35,996,231		35,996,231
Total Disbursements	50,554,653	89,989,597	110,385,005	0	291,443,949
FEES:					
U.S. Court Fees (Note 4)	364,000	586,857	396,307	29,801	1,553,965
Total Disbursements and Fees	**82,190,253**	**93,273,454**	**114,072,758**	**29,801**	**449,369,246**
Increase (decrease) in Liquidity Account	**(8,454,253)**	**(17,566,788)**	**(40,109,685)**	**268,205**	**77,226,043**
Liquidity Account Balance, beginning balance	143,088,564	134,634,311	117,067,523	76,957,838	
Liquidity Account Balance, end of period	134,634,311	117,067,523	76,957,838	77,226,043	
Current Year Commitments: (Note 5)					(23,436,225)
Adjustments: (Note 6)					427,610
Uncommitted Liquidity Account Balance					**54,217,428**
Remaining Reimbursements (Note 3)					(20,000,000)
Remaining Commitments: (Note 7)					(48,805,734)
Total Estimated Funds Available					**335,411,694**
Restoration Reserve					**35,996,170**

Statement 1

Statement of *Exxon Valdez* Settlement Funds
As of October 31, 1996

Beginning Balance of Settlement	900,000,000
Receipts:	
Interest Earned on Exxon Escrow Account	831,233
Net Interest Earned on Joint Trust Fund (Note 1)	14,123,779
Interest Earned on United States and State of Alaska Accounts	3,797,722
Total Interest	18,752,734
Disbursements:	
Reimbursements to United States and State of Alaska	156,371,333
Exxon clean up cost deduction	39,913,688
Joint Trust Fund deposits	354,546,212
Total Disbursements	550,831,233
Funds Available:	
Exxon future payments	350,000,000
Balance in Liquidity Account	77,226,043
Future acquisition payments (Note 2)	(67,881,359)
Alaska Sealife Center	0
Remaining Reimbursements	(20,000,000)
Other (Note 3)	427,610
Total Estimated Funds Available	339,772,294
Restoration Reserve	35,996,170

Note 1: Gross interest earned less District Court registry fees.
Note 2: Includes both current year and future year payments
Note 3: Adjustment for unreported interest earned and lapse

Footnote:

Included in the Total Estimated Funds Available is the sum of $1,570,600 for the FY1997 Chenega-Area Shoreline Residual Oiling Project, $66,000 for KAP 103, $110,500 for KAP 115, $73,500 for KAP135 and $2,540,000 for KEN 54.

Statement 2

Cash Flow Statement
***Exxon Valdez* Liquidity Account**
As of October 31, 1996

Receipts:		
Exxon payments		
December 1991	36,837,111	
December 1992	56,586,312	
September 1993	68,382,835	
September 1994	58,728,400	
September 1995	67,303,000	
September 1996	66,708,554	
Total Deposits	354,546,212	354,546,212
Interest Earned	15,647,944	
Total Interest	15,647,944	15,647,944
Total Receipts		370,194,156
Disbursements:		
Court requests		
June 1992	12,879,700	
January 1993	6,567,254	
June 1993	21,067,740	
November 1993	29,950,000	
December 1993	4,743,925	
June 1994	15,860,728	
October 1994	10,664,256	
November 1994	15,572,295	
January 1995	1,450,000	
April 1995	17,200,000	
May 1995	1,652,014	
August 1995	15,250,000	
September 1995	28,201,032	
November 1995	11,294,667	
January 1996	5,191,122	
March 1996	8,000,000	
May 1996	6,527,500	
September 1996	43,375,485	
Total Requests	255,447,718	255,447,718
District Court Fees	1,524,164	1,524,164
Transfer to the Restoration Reserve (2/15/96)		35,996,231
Total Disbursements		292,968,113
Balance in Joint Trust Fund		77,226,043

Schedule of Payments from Exxon
As of October 31, 1996

Disbursements:	December 91	December 92	September 93	September 94	September 95	September 96	Total
Reimbursements:							
United States							
FFY92	24,726,280	0	0				24,726,280
FFY93	0	24,500,000	11,617,165				36,117,165
FFY94	0	0	0	6,271,600			6,271,600
FFY95	0	0	0		2,697,000		2,697,000
Total United States	24,726,280	24,500,000	11,617,165	6,271,600	2,697,000	0	69,812,045
State of Alaska							
General Fund:							
FFY92	25,313,756	0	0				25,313,756
FFY93	0	16,685,133	0				16,685,133
FFY94	0	0	14,762,703				14,762,703
FFY95	0	0	0	0			0
Mitigation Account:							
FFY92	3,954,086	0	0				3,954,086
FFY93	0	12,314,867	0				12,314,867
FFY94	0	0	5,237,297	5,000,000			10,237,297
FFY95 (Prevention Account)	0	0	0		0		0
FFY96 (Prevention Account)						3,291,446	3,291,446
Total State of Alaska	29,267,842	29,000,000	20,000,000	5,000,000	0	3,291,446	86,559,288
Total Reimbursements	53,994,122	53,500,000	31,617,165	11,271,600	2,697,000	3,291,446	156,371,333
Deposits to Joint Trust Fund							
FFY92	36,837,111	0	0				36,837,111
FFY93	0	56,586,312	68,382,835				124,969,147
FFY94	0	0	0				0
FFY95	0	0	0	58,728,400	67,303,000		126,031,400
FFY96						66,708,554	66,708,554
Total Deposits to Joint Trust Fund	36,837,111	56,586,312	68,382,835	58,728,400	67,303,000	66,708,554	354,546,212
Exxon clean up cost deduction	0	39,913,688	0	0	0	0	39,913,688
Total Payments	90,831,233	150,000,000	100,000,000	70,000,000	70,000,000	70,000,000	550,831,233

Remaining Exxon payments to be made:

September 1994	0
September 1995	0
September 1996	0
September 1997	70,000,000
September 1998	70,000,000
September 1999	70,000,000
September 2000	70,000,000
September 2001	70,000,000
	350,000,000

Schedule of Disbursements
***Exxon Valdez* Liquidity Account**
As of October 31, 1996

	United States	State of Alaska	Court Request Total	Court Fees	Disbursements Total
Court Request 1	6,320,500	6,559,200	12,879,700		
Total Fiscal Year 1992	6,320,500	6,559,200	12,879,700	23,000	12,902,700
Court Request 2	3,074,029	3,493,225	6,567,254		
Court Request 3	6,031,852	15,035,888	21,067,740		
Total Fiscal Year 1993	9,105,881	18,529,113	27,634,994	154,000	27,788,994
Court Request 4		29,950,000	29,950,000		
Court Request 5	2,516,069	2,227,856	4,743,925		
Court Request 6	1,407,818	12,211,164	13,618,982		
Court Request 7	2,084,500	157,246	2,241,746		
Total Fiscal Year 1994	6,008,387	44,546,266	50,554,653	364,000	50,918,653
Court Request 8	3,576,179	7,088,077	10,664,256		
Court Request 9	3,226,182	3,111,204	6,337,386		
Court Request 10		9,234,909	9,234,909		
Court Request 11	1,450,000		1,450,000		
Court Request 12	17,200,000		17,200,000		
Court Request 13	1,480,251	171,763	1,652,014		
Court Request 14	15,250,000		15,250,000		
Court Request 15	5,837,316	9,863,716	15,701,032		
Court Request 16		12,500,000	12,500,000		
Total Fiscal Year 1995	48,019,928	41,969,669	89,989,597	586,857	90,576,454
Court Request 17		3,294,667	3,294,667		
Court Request 18	8,000,000		8,000,000		
Court Request 19	3,222,224	1,968,898	5,191,122		
Restoration Reserve Transfer			35,996,231		
Court Request 20		8,000,000	8,000,000		
Court Request 21	1,007,000	5,520,500	6,527,500		
Court Request 22	18,818,600	24,556,885	43,375,485		
Total Fiscal Year 1996	31,047,824	43,340,950	110,385,005	396,307	110,781,312
Court Request 23			0		
Court Request 24			0		
Court Request 25			0		
Court Request 26			0		
Court Request 27			0		
Total Fiscal Year 1997	0	0	0	29,801	29,801
Total	**100,502,520**	**154,945,198**	**291,443,949**	**1,553,965**	**292,997,913**

Exxon Valdez Liquidity Account							
Interest Earned/District Court Registry Fees							
As of October 31, 1996							
	FFY 1992	FFY 1993	FFY 1994	FFY 1995	FFY 1996	FFY 1997	Total
Earnings Deposits	17,683	31,124	33,476	55,809			138,092
Earnings Allocated:							
1991	28,704						28,704
1992	526,613	553,696					1,080,309
1993		639,180	1,461,735				2,100,915
1994			1,876,789	1,402,937			3,279,726
1995				3,661,063	1,202,209		4,863,272
1996					2,364,556	268,205	2,632,761
Total	555,317	1,192,876	3,338,524	5,064,000	3,566,766	268,205	13,985,687
Total Earnings	573,000	1,224,000	3,372,000	5,119,809	3,566,766	268,205	14,123,779
Registry Fees:							
1991	3,189						3,189
1992	19,811	100,223					120,034
1993		53,777	179,658				233,435
1994			184,342	180,072			364,414
1995				406,785	133,579		540,364
1996					262,729	29,801	292,529
Total	23,000	154,000	364,000	586,857	396,307	29,801	1,553,965
Gross Earnings	596,000	1,378,000	3,736,000	5,706,666	3,963,073	298,005	15,677,744

Schedule of Interest Earned on United States and State of Alaska Accounts As of October 31, 1996			
	State of Alaska EVOSS Account	United States NRDA& R	Total
June 1992	22,675		22,675
June 1993	7,713		7,713
July 1993	38,502		38,502
August 1993	31,719		31,719
September 1993	21,069		21,069
October 1993	19,030		19,030
November 1993	28,561		28,561
December 1993	16,817		16,817
January 1994	22,398		22,398
February 1994	19,086	117,178	136,264
March 1994	20,754		20,754
April 1994	18,714		18,714
May 1994	15,878		15,878
June 1994	17,707	24,823	42,530
July 1994	52,823		52,823
August 1994	43,845		43,845
September 1994	40,408	43,567	83,975
October 1994	44,291		44,291
November 1994	63,286		63,286
December 1994	67,496	3,849	71,346
January 1995	89,341		89,341
February 1995	100,714		100,714
March 1995	104,570	17,033	121,603
April 1995	95,432		95,432
May 1995	92,595		92,595
June 1995	80,613	50,042	130,655
July 1995	76,424		76,424
August 1995	68,771		68,771
September 1995	59,945	44,826	104,771
October 1995	133,486		133,486
November 1995	154,119		154,119
December 1995	143,917	39,567	183,484
January 1996	134,300		134,300
February 1996	122,348		122,348
March 1996	132,469	64,381	196,850
April 1996	126,550		126,550
May 1996	136,732		136,732
June 1996	145,501	73,267	218,768
July 1996	128,195		128,195
August 1996	106,079		106,079
September 1996	110,890	29,042	139,933
October 1996	181,598		181,598
Total	3,290,146	507,576	3,797,722

NOTE: The $117,178 NRDA&R interest figure is cummulative.

Interest was earned for the period July 1992 through May 1993, but the specific amounts have been hidden to allow the spreadsheet to print on one page.

Schedule of Interest Adjustments to the Court Requests
As of October 31, 1996

	June 1992	December 1992	June 1993	December 1993	June 1994	October 1994	November 1994	December 1994	March 1995	August 1995	January 1996	May 1996	July 1996	August 1996	Total	Unallocated Interest
Disbursements:																
Court Requests																
United States																
FFY92	0														0	
FFY93		39,871	3,648												43,519	
FFY94				51,231	22,427										73,658	
FFY95						34,621		37,618	3,849	63,226					139,314	
FFY96											48,676	37,100	26,600	109,666	222,042	
Total United States	0	39,871	3,648	51,231	22,427	34,621	0	37,618	3,849	63,226	48,676	37,100	26,600	109,666	478,533	29,043
State of Alaska																
FFY92	0														0	
FFY93		80,775	35,012												115,787	
FFY94				64,944	239,090										304,034	
FFY95						52,823	117,838	44,291	320,837	449,634					985,423	
FFY96											262,202	300	289,400	934,433	1,486,335	
Total State of Alaska	0	80,775	35,012	64,944	239,090	52,823	117,838	44,291	320,837	449,634	262,202	300	289,400	934,433	2,891,579	398,567
Total Adjustment	0	120,646	38,660	116,175	261,517	87,444	117,838	81,909	324,686	512,860	310,878	37,400	316,000	1,044,099	3,370,112	427,610

Footnotes:

The unallocated interest is tied to the INT Acct. sheet.

Schedule of Lapse Adjustments to the Court Requests
As of October 31, 1996

	December 1993	June 1994	August 1995	August 1996	Total
Disbursements:					
Court Requests					
United States					
FFY92					0
FFY93					0
FFY94		3,106,555			3,106,555
FFY95					0
FFY96			301,558		301,558
FFY97				1,165,334	1,165,334
Total United States	0	3,106,555	301,558	1,165,334	3,408,113
State of Alaska					
FFY92					0
FFY93					0
FFY94	3,661,600				3,661,600
FFY95					0
FFY96			2,376,950		2,376,950
FFY97				2,500,448	2,500,448
Total State of Alaska	3,661,600	0	2,376,950	2,500,448	6,038,550
Total Adjustment	3,661,600	3,106,555	2,678,508	3,665,782	9,446,663

Footnote

The August 1995 adjustment for the Federal Government included an $80,700 reimbursement associated with excessive payment for final costs relating to damage assessment activities.

Schedule of Work Plan Authorizations and Other Authorizations

	FFY 92	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	Total
United States:							
June 15, 1992	6,320,500	0	0				
January 25, 1993	0	3,113,900	0				
January 25, 1993	0	6,035,500	0				
November 10, 1993	0	0	0				
November 30, 1993	0	0	2,567,300				
June 1994			4,536,800				
June 1994			84,500				
July 1994			1,500,000				
August 1994				2,110,800			
November 1994				2,514,200			
December 1994				749,600			
March 1995				1,484,100			
August 1995				(36,700)	6,238,800		
December 1995					3,270,900		
January 1996					150,000		
April 1996					478,000		
May 1996					37,100		
June 1996					26,600		
August 1996						7,938,400	
Total United States	6,320,500	9,149,400	8,688,600	6,822,000	10,201,400	7,938,400	49,120,300
State of Alaska							
June 15, 1992	6,559,200	0	0				
January 25, 1993	0	3,574,000	0				
January 25, 1993	0	7,570,900	0				
November 30, 1993	0	1,500,000	4,454,300				
June 1994			12,391,700				
June 1994			215,800				
July 1994			0				
August 1994				7,140,900			
November 1994				9,098,700			
December 1994				180,500			
March 1995				492,600			
August 1995				36,700	12,653,600		
December 1995					2,231,100		
April 1996					500,000		
May 1996					300		
June 1996					289,400	1,570,600	
August 1996						13,341,500	
Total State of Alaska	6,559,200	12,644,900	17,061,800	16,949,400	15,674,400	14,912,100	83,801,800
Total Work Plan	12,879,700	21,794,300	25,750,400	23,771,400	25,875,800	22,850,500	132,922,100

	FFY 92	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	Total
Other Authorizations							
United States:							
Orca Narrows (6/94, Eyak)			2,000,000	1,650,000			3,650,000
Kodiak National Wildlife Refuge (3/95, 9/95 AKI)				21,000,000	7,500,000		28,500,000
Kodiak National Wildlife Refuge (3/95, 9/95 Old Harbor)				11,250,000			11,250,000
Koniag					12,500,000		12,500,000
Small Parcels					534,200	2,790,000	3,324,200
Total United States			2,000,000	33,900,000	20,534,200	2,790,000	59,224,200
State of Alaska:							
Kachemak Bay State Park (1/95)		7,500,000					7,500,000
Seal Bay (11/93,11/94,11/95,11/96)			29,950,000	3,229,042	3,294,667	3,075,625	39,549,334
Shuyak (3/96, 10/96 - 10/02					8,000,000	2,194,266	10,194,266
Small Parcels					5,020,500		5,020,500
Alaska SeaLife Center				12,500,000	12,456,000		24,956,000
Total State of Alaska		7,500,000	29,950,000	15,729,042	28,771,167	5,269,891	87,220,100
Total Land and Capital Acquisitio	0	7,500,000	31,950,000	49,629,042	49,305,367	8,059,891	146,444,300
Restoration Reserve			12,000,000	12,000,000	12,000,000		36,000,000
Total	12,879,700	29,294,300	69,700,400	85,400,442	87,181,167	30,910,391	315,366,400

Footnotes:

Work Plan Authorization and Land/Capital Acquisitions only. Will not balance to the Schedule of Disbursements from the Joint Trust Fund or the court requests due to the reauthorization of projects (carry-forward) and deductions for interest and lapse.

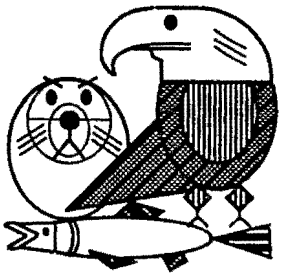
This schedule does tie to the quarterly reports with the exception of 93' and 92'. In FY93 the Work Plan represented the transition to the Federal Fiscal Year from the Oil Year or a seven month period. This schedule presents authorization on the Federal Fiscal Year and as such FFY92 and FFY93 does not balance.

The Trustee Council conditionally approved $181,900 for Fleming Spit on 6/1/95. However, the project has not approved by the Department of Justice and as such has not been included on this statement.

The Trustee Council approved $1,900,000 for the Chenega-Area Shoreline Residual Oiling Project June 28, 1996. Of the total, $293,000 was allocated to FFY 96 and $36,400 was allocated to FFY97. The remainder of $1,570,600 will be allocated to FFY 97 based on the final remediation plan.

Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



November 18, 1996

Susan Stephenson
Executive/Development Director
The Marine Center
POB 34782
Juneau, Alaska 99803

Dear Ms. Stephenson:

Thank you for your recent letter concerning your efforts to develop the proposed Marine Center in Juneau and your inquiry regarding possible funding support from *Exxon Valdez* oil spill civil settlement trust funds.

The Trustee Council, including Attorney General Bruce Botehlo, has asked me to respond to your request for information. In addition, Senator Stevens has asked me to address your questions. Although I do not have a comprehensive project proposal to review, based on your description of the project, it would not likely be eligible for funding under the terms of the *Restoration Plan* adopted by the Trustee Council in November 1994.

First, the proposed Marine Center project lies outside the spill-impacted area. The *Restoration Plan*, which guides all Trustee Council funding decisions, includes a specific policy that restoration activities will occur primarily within the spill area where the biological resources were injured and the need for restoration is greatest. The *Restoration Plan* recognizes the possibility for limited restoration activities outside the spill area, but subject to two conditions:

— when the most effective restoration actions for an injured population are in part of its range outside the spill area, or

— when the information required from research and monitoring activities outside the spill area will be significant for restoration or understanding injuries within the spill area.

An example of a project the Council has funded for work outside the spill area is a program to eradicate introduced predators (e.g., foxes, rats) on islands with important seabird colonies. In this case, the Council recognized that predator removal was a very cost-effective means to greatly benefit migratory seabird species that were damaged by the spill.

Second, the proposal you describe is essentially educational in nature and your letter makes reference to the Trustee Council's funding support for the Alaska SeaLife Center. It is important to clarify that Trustee Council funding for the Alaska SeaLife Center was specifically restricted to only support construction of the research components of the project and is *not* available for the public education, visitation and tourism aspects of the project. These other elements of the Alaska SeaLife Center are being funded through a combination of debt financing and additional private fund-raising by the project sponsors. The Trustee Council's investment in the Alaska SeaLife Center was made to support the construction of basic research infrastructure (laboratory space, holding tanks, fresh and salt water systems, etc.) needed for long-term marine mammal, seabird and fishery genetics research on species injured by the *Exxon Valdez* spill. No such facilities currently exist within the spill area.

Additionally, it appears that there is some confusion regarding Trustee Council funding for public information. The Council has not allocated $35 million toward public information as suggested in your letter. Rather, as indicated by the Council's most recent annual report, past and projected funding over the entire settlement payment period (1991 - 2001) is estimated at $30.9 million for the combination of: 1) overall administration of the restoration program; 2) management of the Council's scientific program including an extensive independent peer review process; and 3) public information and involvement efforts including support for the Council's 17-member Public Advisory Group. This combined allocation for "Public Information, Science Management and Administration" is projected to account for less than five percent of the total $900 million civil settlement.

Trustee Council support for public information activities has been specific to the restoration program, in order to facilitate meaningful public participation in the decision-making process and to provide information to spill-impacted community residents and others about the results of the *Exxon Valdez* restoration efforts, especially as they address the recovery of the injured resources and services damaged by the spill. Although proposals for more general "public education" efforts have been suggested in the past, only those specific to the *Exxon Valdez* oil spill restoration effort have been considered as eligible for settlement funding.

I hope this additional information is helpful to you. To help you decide whether to pursue support from the Trustee Council as a funding source, I am enclosing a copy of the *Restoration Plan* together with a copy of our most recent annual report. Our FY 98

Invitation will be published mid-February and I will be sure to add your name to our distribution list.

Please let me know if I can provide further assistance.

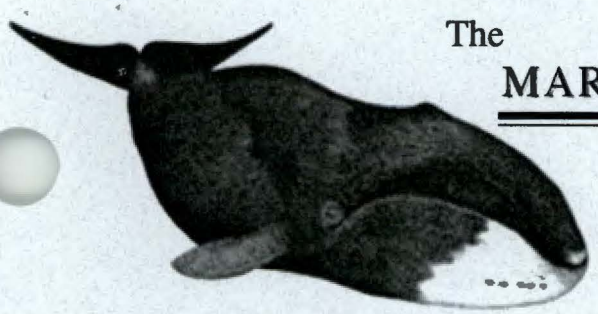
Sincerely,

Molly McCammon
Executive Director

enclosures

cc: Michele Brown, Commissioner, ADEC
Bruce Botelho, Attorney General, State of Alaska
George T. Frampton, Jr., U.S. Department of the Interior
Steve Pennoyer, Director, U.S. NOAA/National Marine Fisheries Service
Phil Janik, Regional Forester, U.S. Forest Service
Frank Rue, Commissioner, ADF&G
Senator Ted Stevens

mm/raw



The
MARINE CENTER

October 21, 1996

PO Box 34782
Juneau, Alaska 99803
Voice/Fax (907) 364-2806
endeavor@ptialaska.net

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

Dear Ms. McCammon:

The MARINE CENTER is a developing not-for-profit facility to be located in Juneau. Its focus is twofold. First, it will provide our half-million annual international visitors and 30,000 local residents with information about the biodiversity of the Alaskan marine environment. Second, it will present issues which threaten our global marine ecosystems. The purpose of this letter is to determine whether the Exxon Valdez Oil Spill Trustee Council might consider a contribution to the project. I am aware that deadlines have passed, that you have just begun your new fiscal year, that your mission is spill specific, that I may appear impertinent approaching the council in this way. I wish to express my concern regarding that possible impression and my gratitude for your valuable time.

Your mission statement refers to the restoration of our "world renowned ecosystem." It pledges accomplishment of restoration through an interdisciplinary program that includes "Meaningful Public Participation." To that end, $35 million dollars have been allocated for "public information" from the Settlement Fund. In your FY97 Invitation document there is one statement which I found of particular relevance to my concerns: "Residents of communities affected by the spill have asked the Trustee Council to be more aware of local concerns and issues and local and traditional knowledge when planning, implementing and evaluating restoration projects." Also, within your personal 1996 Status Report letter you stated that new efforts include the "participation of high school students in restoration projects and creation of a network of community liaisons." It is within this public-participation/information, local-concern, community-liaison paradigm that I have found what I consider to be an appropriate basis for my appeal. That is because each of these standards is a fundamental element of The MARINE CENTER project.

I have found that our world-renowned ecosystem is a precious source of pride and focus to most Alaskans and that our multinational visitors are captivated by this same biodiversity and scenic beauty. Juneau was dramatically and emotionally impacted by the Exxon Valdez event. I recall eulogies for Prince William Sound and discussions about grieving the love and loss of a part of our home where many Alaskans have never even traveled. But the loss was real and palpable and Southeast Alaskans experienced a tremendous grief and anger in what appeared to be the death of a closely related friend. The spill was a focus internationally and our visitors were inquisitive and eager to know more about the impact and the outcome of that calamity. I am sure I am not telling you anything you do not already know. I believe that your literature demonstrates a concern for your relationship with those whose lives were impacted by the spill. Indeed, the $35 million dollar allocation for public information, management, and administration speaks for itself. I feel that it is a logical extension of your mission to include an expression of your efforts in Alaska's capital city. My proposal is very simple and economical -- especially when compared to the $25 million dollar investment in the SeaLife Center.

The MARINE CENTER will display marine species (replicated or preserved) which are indigenous to the state, including the polar regions. Interactive exhibits, many produced by San Francisco's EXPLORATORUIM, will challenge perceptions of the natural world. Art/science pieces will draw our visitors into the aesthetics of the marine environment. Photographic exhibits will recall cultural and natural history which has impacted and shaped the Alaskan marine experience from commercial and subsistence whaling to the Exxon Valdez oil spill. At the same time, The MARINE CENTER will create the opportunity to increase environmental awareness and change consumer attitudes that, as individuals, we might eliminate behaviors which damage or deplete our natural resources. A major focus will be placed upon the issue of marine debris and entanglement. It is upon the issue of environmental conservation globally that I have based a needs assessment in grant queries to 31 prominent national foundations.

Recently a waterfront site has become available in Juneau which would adapt itself perfectly to this facility. It is adjacent to the DIPAC fish hatchery which is an established stop for tour buses. The congruence of the two, both in theme and location, presents an ideal marketing package. The property, owned and leased out by the state, can be secured for $200,000 (perhaps less); the facility built at $70 a square foot or, if structurally feasible, a remodel of the existing building done for $30 to $40 a square foot. Size and finishing will be dependent upon funding. This window of opportunity exists now, which is the reason I am appealing to you in this manner. I need assistance to secure this property and construct a shell approximately 40' by 70'. Exhibits will be purchased from multiple grants and corporate underwriting support. It is a MARINE CENTER goal to be self-sustaining through revenues from admission fees, gift shop sales, membership fees, and facility rental fees. Staff will include paid personnel and volunteer docents.

I have been two years researching and developing this project. I have attracted an advisory board which includes 14 members representing various disciplines and backgrounds including state and federal biologists, an environmental minister, a Tlingit elder, a veterinarian, an accountant, and two attorneys. I have traveled to three Alaskan whaling villages and consulted with the executive director of the Alaska Eskimo Whaling Commission and two members of the Beluga Whaling Commission. I am lobbying our Alaskan legislators on both the state and national levels. In July, I applied to The Tides Center in San Francisco for sponsorship and was recently notified that they accepted The Marine Center as one of their projects. (See enclosed letter.) My background is business and development. I have a special interest in conserving the environment while, at the same time, developing our economic growth potentials and honoring the traditions of our indigenous peoples.

This facility is needed in Juneau. It can provide us with a forum to integrate our responsibilities and concerns with those confronting our state and global communities. It will provide our capital city with a relevant meeting place and for our citizens and students the opportunity to become liaisons with others statewide in the process of becoming informed and concerned about contemporary environmental issues. Thank you for your time and your consideration. I look forward to hearing from you.

Sincerely,

Susan Stephenson

Susan Stephenson
Executive/Development Director

Enclosure

The
Tides
Center

P.O. Box 29907
San Francisco, CA 94129-0907
Tel: 415.561.6500
Fax: 415.561.6501

2000 P Street NW, Suite 408
Washington, DC 20036
Tel: 202.833.4664
Fax: 202.833.4670

October 16, 1996

To Whom It May Concern,

The MARINE CENTER, a project of The Tides Center, has submitted a grant request to your Foundation. By means of this letter, we wish to describe in detail the position of this project in the structure of the Center.

The Tides Center is a duly registered public charity, exempt from Federal income taxation under Section 501(c)(3) of the Internal Revenue Code. The Center offers unique opportunities for emerging and existing charitable activities which promote progressive social change on a local, national, and international level. Formerly known as the Tides Foundation Projects Program, The Tides Center has successfully managed hundreds of creative projects. The Center now operates as a sister organization to the Tides Foundation, which was established in 1976 to promote creative nonprofit activity and to manage philanthropic resources dedicated to social change. The Center, like the Tides Foundation, focuses its activities on five principal areas of interest: social justice, community affairs, economic public policy and enterprise development, international affairs, and environment and natural resources.

All projects undertaken by Tides are approved by its Board of Directors, since they are direct corporate activities of The Tides Center. As such, Tides assumes legal and fiscal responsibility for all activities of its projects. The program, personnel and finances of the Project are managed, supervised and controlled by the Board of Directors of The Tides Center through its President, who delegates to the project director responsibility for the day-to-day operations of the project. The Center does not assume responsibility for projects casually. We search for programs that are innovative with strong potential to make concrete contributions in our interest areas. Consequently we are pleased to have added The MARINE CENTER to our organization.

The purpose of The Tides Center is to develop and nurture competently managed and innovative nonprofit organizations. Its main function is to provide essential financial, human resources, and administrative services to projects. The staff of Tides Administrative Offices maintain oversight over project activities and provides orientation and training workshops to projects. Effective January 1, 1996, a nine percent allocation is taken from project revenues for these services. Projects accepted by Tides' Board of Directors prior to this date will continue with an eight percent allocation until January 1, 1997. Projects may spin-off, establishing their own organizational and legal identity, after an initial period within Tides.

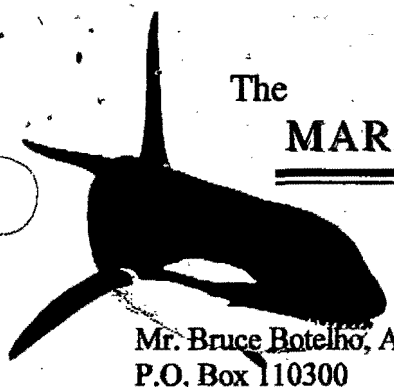
Critical oversight of all grants is provided by staff of The Tides Center. We review and sign all grant agreements, note reporting deadlines and disbursement schedules, receive the funds, and send acknowledgement letters to funders. The Tides Center employs a strict fund accounting system, which means that every Tides project has its own separate accounting division or "fund" with its own balance sheet. This maintains a strict segregation of funds, assets, and liabilities belonging to each project. The project develops the programmatic report and utilizes Tides' financial statements.

Currently, Tides is responsible for over 225 projects supported by grants from foundations, other institutions, and individuals. Expenditures for The Tides Center (as the Projects Program of the Tides Foundation) in FY 94/95 were $20.3 million. Tides uses a full fund accounting system and its books are audited annually by the accounting firm Deloitte & Touche, San Francisco. We should note that Tides has consistently received clean audits and that the auditors consult annually with our Board of Directors.

Thank you for your consideration of this grant request.

Sincerely,

Miyoko Oshima
Director of Program



The
MARINE CENTER

October 21, 1996

PO Box 34782
Juneau, Alaska 99803
Voice/Fax (907) 364-2806
endeavor@ptialaska.net

Mr. Bruce Botelho, Attorney General
P.O. Box 110300
Juneau, AK 99811

Dear Mr. Botelho:

The purpose of this letter is to introduce myself to you and to familiarize you with a project that I have been developing for two years. It is called The MARINE CENTER and will be a not-for-profit facility located in Juneau. Its purpose is to augment the marine experience shared by the residents and visitors of Southeast Alaska.

I believe this project will be an asset to our community for several reasons. It will provide a focus for the residents of Juneau to explore and expand their knowledge of the biodiversity which surrounds us. Its mission will be to provide information about Alaskan marine mammals and their habitat and to foster personal responsibility for the conservation of our natural local and global resources. It will provide an element of tourism which is lacking in Southeast Alaska. That is, it will interpret and expand the wildlife experiences sought by our half-million, multi-national annual visitors. It will add through that facet a significant component to the tourism industry and the economic development of Juneau.

I anticipate funding through several sources. I recently sent 31 query letters to major charitable foundations throughout the United States. My problem statement is based upon the need to provide the public with an understanding of the responsibility of the individual to develop behaviors which will conserve our natural resources. Because of the volume of visitors to Juneau, and potentially to The MARINE CENTER, the opportunity to inform substantial numbers of an international public presents itself. I have written to Ms. Molly McCammon, Executive Director of the Exxon Valez Oil Spill Trustee Council, to determine the potential for assistance from the settlement fund which allocated $35 million dollars for public information. I believe that because Juneau is the capital city of Alaska, a "chapter" for their efforts would be well represented here and would dovetail perfectly with the mission of The MARINE CENTER. I enclose copies of that letter and a Tides Center letter of acceptance for sponsorship to further describe this project and my efforts.

I am writing to you because you are a resident of Juneau and a member of the Spill Council. I will be happy to provide you with more information and copies of grant applications. Thank you for your time and consideration on behalf of The MARINE CENTER and our community of Juneau.

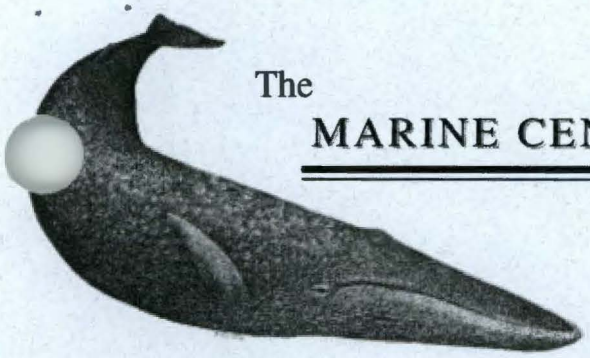
Sincerely,

Susan Stephenson

Susan Stephenson
Executive/Development Director

Enclosures

file w/other letter



The
MARINE CENTER

PO Box 34782
Juneau, Alaska 99803
Voice/Fax (907) 364-2806
endeavor@ptialaska.net

December 1, 1996

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

Dear Ms. McCammon:

I wish to express my gratitude for your letter of November 18, 1996, explaining restoration guidelines and policy. I appreciate your time and effort in addressing my concerns. Alaska is defined, in part, by our marine ecosystems. It is my hope that a MARINE CENTER in Juneau may augment the fine work of the Oil Spill Trustee Council.

Sincerely,

Susan Stephenson

Susan Stephenson
Executive/Development Director

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240
December 20, 1996

Ms. Susan Stephenson
Executive/Development Director
The Marine Center
P.O. Box 34782
Juneau, AK 99803

Dear Ms. Stephenson:

Thank you for your letter of October 21, 1996, regarding possible opportunities for The Marine Center to participate in the *Exxon Valdez* oil spill ecosystem restoration program. We appreciate your efforts to provide information to the public regarding the importance of marine species and marine ecosystems in Alaska.

In terms of funding from the Trustee Council, the Council has an established process for considering restoration projects. I would encourage you to work with Ms. Molly McCammon, the executive director of the Council, and the Council staff in Anchorage.

Given the large number of visitors to Glacier Bay National Park who transit through Juneau, there might be an additional opportunity for a partnership with the National Park Service in the Juneau area. Accordingly, a copy of your letter has been forwarded to the National Park Service--Alaska Field Office and Glacier Bay National Park for consideration.

Thank you again for your interest in the ecosystem restoration effort in the spill zone. If you have any additional questions, please feel free to contact Mr. Daniel Sakura in my office at 202-208-4678.

Sincerely,

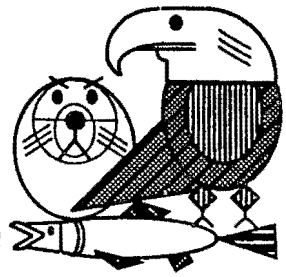
George T. Frampton, Jr.

George T. Frampton, Jr.
Assistant Secretary for Fish
and Wildlife and Parks

cc: Ms. Molly McCammon
Mr. Robert Barbee

Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



FAX MEMORANDUM (21 pp.)

TO: Restoration Work Force

FROM: Sandra Schubert
Project Coordinator

RE: Executive Director's Recommendation on Deferred Projects

DATE: November 18, 1996

Attached are two documents requiring your review for the November 20 Work Force meeting:

1. A spreadsheet of the Chief Scientist's and Executive Director's recommendations on FY 97 projects deferred by the Trustee Council in August. The spreadsheet is in numerical order by project number.

2. A short version of the spreadsheet, which contains funding recommendations only (no text). This spreadsheet is in order by cluster.

Please come to the Work Force meeting prepared to discuss the Executive Director's recommendations. In addition, please bring corrections to the spreadsheets. This will be your last opportunity to review the spreadsheets before they are finalized for inclusion in the Trustee Council's meeting packet.

Please call if you have any questions about these materials. Otherwise, see you Wednesday, 9:00 a.m.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj. No.	Project Title	'97 Revised Request	FY 97 Approved	**FY 97 Deferred**	**ExecDir Recom.**	FY 98 Estimate	FY 99 Estimate	Total FY97-02	Exec. Director's Recommendation
Pacific Herring		$380.3	$200.0	**$180.3**	**$140.3**	$0.0	$0.0	$340.3	
97166	Herring Natal Habitats	$340.3	$200.0	**$140.3**	**$140.3**			$340.3	Fund
97248	Collection Historical Data/Local Knowledge	$40.0	$0.0	**$40.0**		$0.0	$0.0	$0.0	Continue defer
Sockeye Salmon		$301.3	$0.0	**$294.3**	**$43.7**	$0.0	$0.0	$43.7	
97239	Salmon Carcasses and Juvenile Chinook	$134.5	$0.0	**$127.5**	**$0.0**	$0.0	$0.0	$0.0	Do not fund
97251	Akalura Lake Restoration	$43.7	$0.0	**$43.7**	**$43.7**	$0.0	$0.0	$43.7	Fund
97254	Delight and Desire Lakes Restoration	$123.1	$0.0	**$123.1**	**$0.0**	$0.0	$0.0	$0.0	Do not fund
Marine Mammals		$157.5	$1.5	**$156.0**	**$156.0**			$157.5	
97012-BAA	Killer Whale Investigation	$157.5	$1.5	**$156.0**	**$156.0**			$157.5	Fund
Nearshore Ecosystem		$1,836.6	$1,705.8	**$130.8**	**$45.6**	$1,669.4	$450.0	$3,870.8	
97025	Nearshore Vertebrate Predators (NVP)	$1,821.5	$1,705.8	**$115.7**	**$30.5**	$1,669.4	$450.0	$3,855.7	Fund contingent
97026-CLO	Report Writing: Microbial Sediments	$15.1	$0.0	**$15.1**	**$15.1**	$0.0	$0.0	$15.1	Fund
Seabird/Forage Fish and Related Projects		$162.4	$45.1	**$117.3**	**$82.3**	$0.0	$0.0	$127.4	
97159-CLO	Marine Bird Abundance Surveys	$60.1	$45.1	**$15.0**	**$15.0**			$60.1	Fund

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj. No.	Project Title	'97 Revised Request	FY 97 Approved	**FY 97 Deferred**	**ExecDir Recom.**	FY 98 Estimate	FY 99 Estimate	Total FY97-02	Exec. Director's Recommendation
97169	Genetics of Murres, Guillemots, Murrelets	$67.3	$0.0	**$67.3**	**$67.3**			$67.3	Fund
97305	Stable Isotope Analysis of Seabirds	$35.0	$0.0	**$35.0**	**$0.0**	$0.0	$0.0	$0.0	Do not fund
Archaeological Resources		$318.5	$0.0	**$318.5**				$0.0	
97277	Chenega Bay Archaeological Repository	$318.5	$0.0	**$318.5**				$0.0	Continue defer
Subsistence		$110.0	$0.0	**$144.4**	**$60.0**	$133.8	$69.1	$442.0	
97247	Kametolook River Coho Salmon	$31.4	$0.0	**$31.4**	**$31.4**	$13.8	$14.1	$103.4	Fund contingent
97256A	Columbia Lake Sockeye Salmon Stocking	$0.0	$0.0	**$34.4**	**$0.0**	$0.0	$0.0	$0.0	Not feasible
97256B	Solf Lake Sockeye Salmon Stocking	$28.6	$0.0	**$28.6**	**$28.6**	$120.0	$55.0	$338.6	Fund contingent
97281	Forest Workshops	$50.0	$0.0	**$50.0**	**$0.0**	$0.0	$0.0	$0.0	Do not fund
Habitat Improvement		$67.8	$0.0	**$67.8**	**$67.8**	$0.0	$0.0	$67.8	
97230	Valdez Duck Flats Restoration	$67.8	$0.0	**$67.8**	**$67.8**	$0.0	$0.0	$67.8	Fund
Administration, Science Management, and Public Information		$143.2	$0.0	**$137.5**	**$0.0**	$0.0	$0.0	$0.0	
97275	Applied Field-Based Research Program	$37.5	$0.0	**$37.5**	**$0.0**	$0.0	$0.0	$0.0	Do not fund
97301	Television Pilot	$105.7	$0.0	**$100.0**	**$0.0**	$0.0	$0.0	$0.0	Do not fund

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj. No.	Project Title	'97 Revised Request	FY 97 Approved	**FY 97 Deferred**	**ExecDir Recom.**	FY 98 Estimate	FY 99 Estimate	Total FY97-02	Exec. Director's Recommendation
Total:		$3,477.6	$1,952.4	**$1,546.9**	**$595.7**	$1,803.2	$519.1	$5,049.5	

Approved in August: $15,390.3
New Total: $15,986.0

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97012-BAA *Marine Mammals*	Comprehensive Killer Whale Investigation in Prince William Sound	C. Matkin/North Gulf Oceanic Society	NOAA	Cont'd 5th yr. 5 yr. project	$157.5	$1.5	**$156.0**	**$156.0**		$157.5

Project Abstract

This project continues the monitoring of the damaged AB pod and other Prince William Sound killer whales that has occurred on a yearly basis since 1984. It provides further analysis of a GIS database on killer whales. When coupled with genetic and acoustic data, the analysis will evaluate recovery of killer whales, recognize changes in behavioral ecology, estimate killer whale predation on harbor seals, and estimate impacts of the harbor seal decline on the potential recovery of killer whales. Year round residency of killer whales will be assessed using a remote hydrophone system. Environmental contaminant levels in the blubber of specific whales will be determined and potential effects on recovery evaluated.

Chief Scientist's Recommendation

This proposal is excellent, combining well-established techniques and some innovative methods. The publication record of the principal investigator is improving. A successful review was held in November 1996 and I recommend that the work proposed for FY 97 be funded. Funding beyond FY 97 will be contingent on developing objectives and milestones for completion of this project.

Executive Director's Recommendation

Fund. However, funding beyond FY 97 will be contingent on developing objectives and milestones for completion of the project. This project is providing valuable information about the long-term effects of the oil spill on resident and transient pods of killer whales in Prince William Sound and correlates the effects in part to their prey.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97025 *Nearshore Ecosystem*	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators (NVP)	L. Holland-Bartels, et al/NBS-DOI	DOI	Cont'd 3rd yr. 5 yr. project	$1,821.5	$1,705.8	**$115.7**	**$30.5**	$1,669.4	$3,855.7

Project Abstract

The Nearshore Vertebrate Predator project (NVP) makes an integrated assessment of trophic, health, and demographic factors across a suite of apex predators injured by the spill to determine mechanisms constraining recovery and to improve knowledge of the status of recovery. Primary hypotheses are: 1) Recovery of nearshore resources injured by EVOS is limited by recruitment processes; 2) Initial and/or residual oil in benthic habitats and in or on benthic prey organisms has had a limiting effect on the recovery of benthic foraging predators; and 3) EVOS-induced changes in populations of benthic prey species have influenced the recovery of benthic foraging predators.

Chief Scientist's Recommendation

This project uses an ecosystem approach to examine recovery of injured species in the nearshore ecosystem. It was reviewed in depth at a workshop in February 1996. Recently, the results from the avian copredator work have become available, indicating that some continuing work on Barrow's goldeneyes and gulls is advisable but that other aspects of the work can be safely eliminated. In addition, funds to prepare pre-NVP sea otter publications should be contingent on acceptance by the Chief Scientist of reports from Project MM6. Budget increases over previous projections for on-going components (i.e., not including the avian copredator component) were substantial, but the project proposers have reduced these budgets. Fund.

Executive Director's Recommendation

Fund, including an additional $30,500 for the final year of limited avian copredator work, which was deferred by the Trustee Council in August (this includes the final year of field work as well as preparation of the final report). Funding for the avian copredator component is contingent on receipt of the report on 95320Q. Funding for preparation of sea otter publications ($10,000 approved in August) is contingent on acceptance by the Chief Scientist of the reports from Project MM6. The researchers conducting sea otter surveys under this project should explore ways of involving local sea otter hunters in their research/monitoring efforts. In general, the nearshore ecosystem, including intertidal habitat and organisms, was the area hardest hit by the oil spill. This project monitors recovery of intertidal organisms and closely linked vertebrate predators and addresses the question of whether continuing contamination is slowing recovery of vertebrate predators.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97026-CLO *Nearshore Ecosystem*	Report Writing: Integration of Microbial and Chemical Sediment Data	J. Braddock/UAF	ADEC	Cont'd 1st yr. 1 yr. project	$15.1	$0.0	**$15.1**	**$15.1**	$0.0	$15.1

Project Abstract

This project will provide funds to complete final data analysis and report writing begun under Project 95026/Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data. In FY 95, work began late on the project due to a delay in the processing of an RSA from the Department of Environmental Conservation to the University of Alaska Fairbanks. The $15,100 requested here is an amount equal to the amount of FY 95 funds that lapsed before the project could be completed. The analysis of the combined microbial/chemical data sets will allow estimates of removal rates of hydrocarbons from contaminated sediments by biological processes.

Chief Scientist's Recommendation

Funding for additional analyses are recommended for completion of this project with the stipulation that the results of this work be published in open, peer-reviewed scientific literature.

Executive Director's Recommendation

Fund. This project will conclude the analysis and report writing begun under Project 95026, and includes preparation of a manuscript for publication.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97159-CLO *Seabird/Forage Fish and Related Projects*	Surveys to Monitor Marine Bird Abundance in Prince William Sound During Winter and Summer: Report and Publication Writing	B. Agler/DOI-FWS	DOI	Cont'd 4th yr.	$60.1	$45.1	**$15.0**	**$15.0**		$60.1

Project Abstract

In FY 97, this project will fund report and publication writing. Data collected during March 1990, 1991, 1993, 1994, and 1996 and July 1989, 1990, 1991, 1993, and 1996 will be used to examine trends by determining whether populations in the oiled zone changed at the same rate as those in the unoiled zone. Overall population trends for Prince William Sound from 1989-96 will also be examined. In addition, marine bird damage assessment information will be prepared for publication.

Chief Scientist's Recommendation

This project is developing a valuable long-term dataset regarding recovery status of injured species, and the statistical power to detect trends in these highly variable datasets should be reached with FY 96 data. The out-year budgets seem excessive, and any future commitments must be considered annually. Fund at level of revised request, which includes $15,000 for additional statistical analyses. The additional $15,000 should be approved with the stipulation that results of this work be published in the open, peer-reviewed scientific literature.

Executive Director's Recommendation

Fund, including $15,000 for the services of a statistician to assist in preparation of publication of marine bird damage assessment information. Funding also includes preparation of a final report (including 1 month to conduct regression analysis) and two other manuscripts (# 4 and #6 in the proposal) on marine bird abundance. The abundance surveys provide basic information on the status and recovery of seabirds (and sea otters) in Prince William Sound and should now be adequate to detect trends in seabird populations. The need for future surveys should be determined after review of the final report.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97166 *Pacific Herring*	Herring Natal Habitats	M. Willette/ADFG	ADFG	Cont'd 4th yr. 6 yr. project	$340.3	$200.0	**$140.3**	**$140.3**		$340.3

Project Abstract

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

Chief Scientist's Recommendation

This project has been carried out for several years since the oil spill to provide basic information about the spawning biomass of Pacific herring in Prince William Sound. The proposal for FY 97 would compare egg-based estimates of biomass with biomass estimates obtained from acoustic methods. The absence of any absolute abundance measure will make it necessary for the Alaska Department of Fish and Game to eventually choose among age-weight-length analyses from test fishing, aerial surveys of shoreline spawning, hydroacoustic measures, egg-deposition-based abundance and juvenile abundance survey methods developed in the SEA project (/320). The low cost and initial encouraging results from hydroacoustic surveys make this method a likely candidate for a future management tool. Also, 1997 is likely to be a period of continuing rebuilding of the stock. Therefore, the continuation of hydroacoustics is warranted in FY 97. However, it is likely that in FY 98 not all methods now supported by the Trustee Council will be continued.

Executive Director's Recommendation

Fund, including the hydroacoustics component and completion of the herring recruitment model (which were deferred by the Trustee Council in August). In FY 98, fund only one survey method based on peer reviewers' concerns about the difficulty in comparing the herring spawn deposition technique with the hydroacoustic survey. The Alaska Department of Fish and Game has now provided a plan to take over full support of this work after FY 98. This project continues abundance surveys of Pacific herring and supports fisheries management decisions that protect the recovery of the stock.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97169 *Seabird/Forage Fish and Related Projects*	A Genetic Study to Aid in Restoration of Murres, Guillemots, and Murrelets to the Gulf of Alaska	V. Friesen/Queen's University, J. Piatt/DOI-FWS	DOI	New 1st yr. 4 yr. project	$67.3	$0.0	**$67.3**	**$67.3**		$67.3

Project Abstract

Populations of common murres, pigeon guillemots, and marbled and Kittlitz's murrelets from the Gulf of Alaska are failing to recover from the oil spill. This project will use state-of-the-art genetic techniques to aid in their restoration by 1) determining the geographic limits and structure of populations, i.e., the extent to which colonies are genetically isolated or comprise metapopulations, 2) detecting cryptic species and subspecies, 3) identifying sources and sinks, 4) providing genetic markers for the identification of breeding populations of birds killed by the spill, 5) identifying appropriate reference or control sites for monitoring or reintroductions, and 6) determining the role of inbreeding and small effective population sizes in restricting recovery.

Chief Scientist's Recommendation

The Trustee Council is interested in application of genetic techniques to questions about seabird biology. This project has been revised in response to peer review comments with regard to narrowing the objectives, clarifying use of various genetic methods, and reducing travel costs. This project is now recommended for funding.

Executive Director's Recommendation

Fund. The FY 97 Invitation encouraged proposals on the genetics of common murres, marbled murrelets, and pigeon guillemots in order to better understand the relationship between different populations of these species. This proposal was responsive to the Invitation and the PIs have responded to concerns about the objectives and methodologies of the study.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97230 *Habitat Improvement*	Valdez Duck Flats Restoration Project	J. Winchester/PWS Economic Development Council	ADNR	New 1st yr. 2 yr. project	$67.8	$0.0	**$67.8**	**$67.8**	$0.0	$67.8

Project Abstract

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

Chief Scientist's Recommendation

The apparent goal is to prevent loss of habitat values on the Valdez Duck Flats, an area which has some link to injured resources, including pink and sockeye salmon. Several tracts on the Duck Flats are under consideration for possible small-parcel acquisitions by the Trustee Council. The proposal has a heavy up-front emphasis on engineering and construction, but the proposers will first assess wildlife habitat needs and alternative ways of addressing those needs in the face of increasing development and visitor pressures. To their credit, the proposers seem to have the interest and cooperation of a number of key agencies and constituencies.

Executive Director's Recommendation

Fund development of a concept plan for protection of habitat on the Valdez Duck Flats. One option for protecting the flats is affected by the acquisition of three small parcels, for which the appraisals are being reviewed. The Valdez Duck Flats are a large and complex intertidal mudflat and salt marsh that offer valuable habitat to several injured resources and services. A locally developed plan for protecting habitat on the Duck Flats will increase the probability that future use of the flats will promote the recovery of injured resources and services given increased public usage.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97239 *Sockeye Salmon*	Salmon Carcasses and Juvenile Chinook Salmon Production in the Kenai River Ecosystem	D. Schmidt/ADFG	ADFG	New 1st yr. 2 yr. project	$134.5	$0.0	**$127.5**	**$0.0**	$0.0	$0.0

Project Abstract

This project will investigate the role sockeye salmon carcasses play in primary and secondary production within the Kenai River and the potential symbiotic role sockeye salmon escapements have on nutrients and secondary productivity. An ecosystem approach to restoration of this system requires examination of the role salmon carcasses play in freshwater life history of other species. Chinook salmon production may be positively influenced by nutrient additions to the Kenai River. An important feature of the Kenai River studies is to ascertain if there are significant benefits to chinook salmon juveniles with increased escapements.

Chief Scientist's Recommendation

This is an innovative proposal that would examine the sources of carbon and nitrogen for juvenile chinook salmon production in the Kenai River system. The proposal hypothesizes that the nutrients released from sockeye salmon carcasses may provide a significant source of nutrients for juvenile chinook salmon. This approach may provide insight into the importance of sockeye carcasses to the Kenai River ecosystem, but it is somewhat narrowly focused on one species. Although the project would evaluate the broad effects of large sockeye escapements, which may benefit the economically important chinook fishery, the management value of the project is not clear. Lower priority; do not fund.

Executive Director's Recommendation

Do not fund. This project was designed to contribute to an ecosystem-level understanding of the Kenai River system by examining the benefits of sockeye escapement to other in-river processes. However, the management value of the project is not clear and it is a lower priority for funding.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97247 *Subsistence*	Kametolook River Coho Salmon Subsistence Project	J. McCullough & L. Scarborough/ADFG	ADFG	New 1st yr. 6 yr. project	$31.4	$0.0	**$31.4**	**$31.4**	$13.8	$103.4

Project Abstract

This project is a continuation of a project funded in 1996 through the EVOS criminal settlement. The 1996 work is an assessment of what method would be best suited to restore the Kametolook River's coho run to historic levels. This project will provide funding through FY 2002 for ADFG to try conservative and safe enhancement methods. Instream incubation boxes and habitat improvements for spawning and rearing habitat will be evaluated.

Chief Scientist's Recommendation

NEEDS TO BE REWRITTEN -- PEER REVIEW OF REVISED DPD IN PROGRESS.
This proposal does not have a proper technical foundation in relation to EVOS supplementation policy and ADFG genetics policy and needs additional planning.

Executive Director's Recommendation

NEEDS TO BE REWRITTEN -- WAITING FOR PEER REVIEW. IF PEER REVIEW IS FAVORABLE, RECOMMENDATION WILL BE TO FUND.
Defer decision on funding until evaluation phase of project, which was funded through the state's criminal settlement with Exxon Corporation, is complete. Future funding of implementation phase of project would be contingent on approval of (1) a revised Detailed Project Description that addresses technical concerns raised by the Chief Scientist and (2) a reduced budget (this same proposal was also submitted to the criminal settlement fund, and the cost identified was $18.9). This project is designed to enhance a coho salmon run near Perryville as a replacement for subsistence resources injured by the oil spill.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97248 *Pacific Herring*	Collection of Historical Data and Local Environmental Knowledge of Forage Fish and Herring	J. Seitz	ADFG	New 1st yr. 1 yr. project	$40.0	$0.0	**$40.0**		$0.0	$0.0

Project Abstract

Using personal interviews, surveys, and mapping, this project will collect historical and contemporary knowledge about the ecology of herring and other forage fish and map information on their distribution; create an ascii file of mapped data; and create a subject index of textual information on the ecology and life cycle of the fish by species. Data and reports will be provided to participating projects -- SEA (/320) and APEX (/163).

Chief Scientist's Recommendation

This project could contribute to the redevelopment of confidence in fish resources by subsistence users, and possibly provide information on recovery using traditional and local knowledge of pre-spill abundance. The institutional arrangements and project management responsibilities are inadequately defined, and it may be beneficial to formally link this project with other efforts attempting to develop traditional ecological knowledge. Reconsider revised proposal after assessment of all traditional ecological knowledge projects.

Executive Director's Recommendation

Defer decision on funding until Project 97052B/Traditional Ecological Knowledge is underway and a determination has been made as to how the objectives of this project can best be achieved. This project is designed to address restoration objectives for herring and seabirds by contributing indigenous and local knowlege on herring and other forage fish.

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97251 *Sockeye Salmon*	Akalura Lake Sockeye Salmon Restoration	C. Swanton/ADFG		1st yr. 1 yr. project	$43.7	$0.0	**$43.7**	**$43.7**	$0.0	$43.7

Project Abstract

This project will substantiate that the Akalura Lake sockeye salmon stock is naturally recovering from damage caused by the oil spill through continued increased production of sockeye salmon smolts. This will be accomplished if the size of the 1997 smolt emigration is at or above approximately 200,000 fish. Funding will be for a single year of field studies identical to what was conducted during 1996 and a report coupling previous findings (Project /258-Sockeye Overescapement) with those of the 1997 field studies.

Chief Scientist's Recommendation

This project is appropriate for sustained salmon management. However, it is not clear that the current low escapements to Akalura Lake are related to the spill. Zooplankton levels and smolt production in the lake are at good levels as is marine survival of sockeye from Kodiak Island. Fund.

Executive Director's Recommendation

Fund for one year only, including field work and preparation of a final report. This project will conclude the smolt emigration studies on Akalura Lake, which will assist in determining the recovery status of the Akalura sockeye stock.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97254 *Sockeye Salmon*	Delight and Desire Lakes Restoration	N. Dudiak/ADFG	ADFG	New 1st yr. 2 yr. project	$123.1	$0.0	**$123.1**	**$0.0**	$0.0	$0.0

Project Abstract

The project is intended to accelerate the recovery of the currently depressed wildstock sockeye salmon of Delight and Desire lakes through lake fertilization. Application of liquid fertilizer would increase the forage base for rearing sockeye salmon fry through nutrient enrichment. The expected result would be larger, more numerous sockeye smolt with a corresponding increase in marine survival rates.

Chief Scientist's Recommendation

This appears to be, in theory, a reasonable resource replacement proposal. However, there is a risk that the fertilization may not work and the fish may not actually be harvestable at a time that would make them suitable replacements. The initial limnological work proposed in FY 97 appears reasonable. Questions remain, however, about the success and appropriateness of fertilization.

Executive Director's Recommendation

Do not fund. In FY 97 this project would explore the feasibility of fertilization to enhance the sockeye runs in Delight and Desire lakes for commercial and sport fish use. However, unanswered questions about the appropriateness and likely success of fertilization, as well as the likelihood of other funding sources for actual implementation, make this project a low priority for Trustee Council support.

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97256A *Subsistence*	Sockeye Salmon Stocking at Columbia Lake	D. Gillikin/USFS		2nd yr. 7 yr. project	$0.0	$0.0	**$34.4**	**$0.0**	$0.0	$0.0

Project Abstract

This project is designed to benefit subsistence users of northern Prince William Sound by stocking sockeye salmon in Columbia Lake. The lake is a predominantly clearwater lake that has recently become accessible to anadromous fish as Columbia Glacier has retreated. There are two phases to this project. The feasibility phase of the project (FY 96 and FY 97) will determine the ability of Columbia Lake to support a resident population of sockeye salmon. Phase 2 of the project will be to stock the lake with sockeye salmon. If the project is found to be feasible, stocking of the lake could begin in 1999. The stocking program will take five years to establish a self-sustaining run.

Chief Scientist's Recommendation

Feasibility survey conducted by U.S. Forest Service and Alaska Department of Fish and Game concluded that Columbia Lake is not able to support a viable sockeye salmon population. Do not fund.

Executive Director's Recommendation

Do not fund based on feasibility study, which concluded that Columbia Lake is not productive enough to support a viable population of sockeye salmon.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97256B *Subsistence*	Sockeye Salmon Stocking at Solf Lake	D. Gillikin/USFS	USFS	Cont'd 2nd yr. 7 yr. project	$28.6	$0.0	**$28.6**	**$28.6**	$120.0	$338.6

Project Abstract

This project is designed to benefit subsistence users of Prince William Sound and especially residents of Chenega Bay. Habitat improvements were made in 1978, 1980 and 1981 to provide access to Solf Lake for anadromous fish. Investigations suggest that the lake is fishless and has adequate zooplankton biomass to support a salmon population. There are two phases to this project. The feasibility phase (FY 96) will verify the ability of Solf Lake to support a population of sockeye salmon. Phase 2 will stock the lake with sockeye salmon and ensure adequate anadromous access to the lake. If the project is found to be feasible, stocking of the lake could begin in 1998.

Chief Scientist's Recommendation

PEER REVIEW OF REVISED DPD IN PROGRESS.

Executive Director's Recommendation

NEEDS TO BE REWRITTEN -- WAITING FOR PEER REVIEW. IF PEER REVIEW IS FAVORABLE, RECOMMENDATION WILL BE TO FUND.

Defer decision on funding until feasibility work being conducted in FY 96 (the ability of the lake to support a sockeye salmon population and what type of habitat improvements might be necessary to ensure salmon have access to the lake) is evaluated and out-year costs are identified. If feasible, this project could provide sockeye salmon as a replacement for subsistence and sport fishing resources injured by the oil spill, particularly for the residents of Chenega Bay.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97275 *Administration, Science Management, and Public Information*	Rural Development Applied Field-Based Research Program in Oil Spill Affected Areas	G. Pullar/UAF-College of Rural Alaska	ADFG	New 1st yr. 6 yr. project	$37.5	$0.0	**$37.5**	**$0.0**	$0.0	$0.0

Project Abstract

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

Chief Scientist's Recommendation

This proposal is an excellent idea with a sound technical approach. However, it is justified based on an implied lack of leadership in the community, which does not seem to be apparent. There would be more incentive to fund this proposal if village leaders had requested it from the Trustee Council. In addition, the proposal lacks sufficient relationship to restoration objectives. Do not fund.

Executive Director's Recommendation

Do not fund. The decision on funding this project was deferred by the Trustee Council in August, pending further review of the Detailed Project Description and commitments from PIs to incorporate student research into specific restoration projects. The project proposer has not confirmed commitments from PIs.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97277 *Archaeological Resources*	Archaeological Repository and Cultural Facility in Chenega Bay	C. Totemoff/Chenega Corporation	USFS	New 1st yr. 3 yr. project	$318.5	$0.0	**$318.5**			$0.0

Project Abstract

This project will fund an archaeological repository in Chenega Bay. Additional programming under the project will include stewardship of the facility, preservation and curation of artifacts, and educational/cultural programs. During 1997, the work planned for the period includes site control, architectural and engineering final proposals, and program development (in league with Chugach Heritage Foundation), as well as artifact and site inventorying, cataloging, and collecting. Completion of the operations and maintenance plan is also expected during this phase.

Chief Scientist's Recommendation

Although this project would contribute to archaeological restoration objectives with respect to Chenega Bay, there are major long-term issues to be resolved in regard to operation of the facility. This raises both financial and policy questions, which must be addressed by others. Based on this limited proposal and the unresolved long-term issues, I cannot recommend funding at this time.

Executive Director's Recommendation

Defer decision on funding until the Trustee Council decides whether to invite proposals for facilities to restore archaeological resources, in which case a more detailed proposal will be required.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	Project Title	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97281 *Subsistence*	Habitat Improvement Through Redesigned Forest Workshops	R. Ott/Native Village of Eyak Tribal Council	USFS	New 1st yr. 1 yr. project	$50.0	$0.0	**$50.0**	**$0.0**	$0.0	$0.0

Project Abstract

This project will promote habitat improvement by providing Alaska Natives and community leaders with tools for self determination of culturally appropriate economic development of forested lands. These tools will be provided through a series of facilitated workshops that will reexamine all possible land use options in light of the effects of logging on the ecosystem. Cultural needs of the traditional and customary users of the natural resources associated with those lands will be prioritized at the same time as recognizing the priority for maintaining a strong economic base for the land owners. These land use options will provide a much more cost effective way to provide habitat improvement than outright acquisition.

Chief Scientist's Recommendation

While reforestation and sustained uses of forests have a link to habitat protection as a restoration objective, this proposal gives little detail as a basis for technical evaluation. To be successful, any work along the lines of what is proposed would need full support and participation of the Eyak Village Corporation and the Chugach Native Corporation, which are the land owners/managers. Based on the merits of the proposal as presented, the reviewers cannot recommend funding.

Executive Director's Recommendation

Do not fund. The Trustee Council deferred a decision on funding this project until the proposer confirms joint sponsorship by key stakeholders (e.g., Chugach Alaska Corporation, the village corporations, and other village councils). Although the proposer has requested support from key stakeholders, no commitments have been confirmed.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ Research Cluster	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97301 *Administration, Science Management, and Public Information*	The Alaska Laboratory Series Television Pilot	S. Reed/Alaska Public Telecommunications, Inc.	ADFG	New 1st yr. 3 yr. project	$105.7	$0.0	**$100.0**	**$0.0**	$0.0	$0.0

Project Abstract

This project will create a television program that will document ongoing restoration and rehabilitation efforts in Prince William Sound and other spill affected areas. This program will be a pilot to launch The Alaska Laboratory, a national science education series on science and research in Alaska. Many episodes, including the pilot, will center on marine research, rehabilitation, and restoration efforts in Prince William Sound, the Kenai Peninsula and the Gulf of Alaska. APTI, in cooperation with the Alaska SeaLife Center, will produce and distribute the series through national networks, cable, and on Alaska's PBS stations.

Chief Scientist's Recommendation

The proposed television program could increase awareness, both within and beyond Alaska, about the restoration program. This particular proposal is more of an idea than a full proposal. I do not know what priority the Trustee Council wants to give to educational projects such as this television program, but the idea does have merit and may deserve going forward. If deemed appropriate by the Trustee Council, a more complete proposal should be invited.

Executive Director's Recommendation

Do not fund this proposal. Consider further the possibility of funding some elements of this proposal together with media footage to be used for various educational/outreach efforts.

EXECUTIVE DIRECTOR'S RECOMMENDATION ON DEFERRED PROJECTS -- FY 97 WORK PLAN

Proj.No./ *Research Cluster*	ProjectTitle	Proposer	Lead Agency	New or Cont'd	FY97 Revised Request	FY97 Approved	**FY97 Deferred**	**Exec. Dir. Recommend**	FY98 Estimate	Total FY97-02 Estimate
97305 *Seabird/Forage Fish and Related Projects*	Monitoring Response of Seabirds to Changing Prey Availability Using Stable Isotope Analysis	J. Piatt/DOI-NBS	DOI	New 1st yr. 4 yr. project	$35.0	$0.0	**$35.0**	**$0.0**	$0.0	$0.0

Project Abstract

A key component of the ecosystem-level study (APEX-/163) designed to evaluate the response of seabirds to fluctuations in forage fish density following the oil spill is the accurate evaluation of seabird diet through time. Recent advances in the use of naturally occurring stale isotopes of carbon and nitrogen to trace food webs can be applied to seabird communities. This technique will allow trophic dynamics and location of feeding to be traced in association with intra- and inter-seasonal changes in seabird prey. Moreover, the measurement of several tissues of seabirds, including those of their eggs, will be used to establish diet of birds integrated over various time periods.

Chief Scientist's Recommendation

Stable isotope measurement of seabird tissues could contribute much to our understanding of declines of seabird populations relative to food sources. It is recommended that samples gathered in the APEX program in 1995 and 1996 be initially analyzed under Project /170. Lower priority; do not fund.

Executive Director's Recommendation

Do not fund. Samples gathered in the APEX project (/163) are being analyzed under Project 97170 using stable isotope analysis. Consider future funding in context of overall APEX priorities following completion of FY 96 field season.

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
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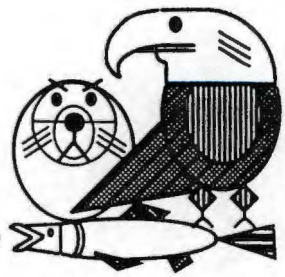

FAX COVER SHEET

To: Restoration Work Force

From: Sandra Schubert Date: November 18, 1996

Comments: Total Pages: 22

FAX COMPLETE

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
Claudia Slater/Bill Hauser
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Piper, Ernie
Rice, Bud
Spies, Bob
Thompson, Ray
Wright, Bruce
Sullivan, Joe

HARD COPY TO FOLLOW _____ FAX SENT BY: _____

8/7/96

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*** MULTI TRANSACTION REPORT ***
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INCOMPLETE TX/RX

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	[13] 19077896608	MORRIS-WRIGHT
	[15] 2698918	CAROL FRIES
	[16] 2672450	RITA MIRAGLIA
	[17] 2713992	R.THOMPSON
	[18] 2672474	SULLIVAN-SLATER
	[19] 7863636	L.BARTELS
	[20] 7863350	C.BERG
	[24] 2697652	E.PIPER
	[35] 15103737834	B.SPIES
	[38] 2715827	G.BELT
ERROR	[21] 2572517	B.RICE

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*** ACTIVITY REPORT ***
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TRANSMISSION OK

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CONNECTION ID	B.RICE
START TIME	11/18 16:12
USAGE TIME	10'48
PAGES	22
RESULT	OK

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178

MEMORANDUM

TO: Claudia Slater
ADF&G Liaison

FROM: Molly McCammon
Executive Director

RE: Budget Projections for FY 98

DATE: November 18, 1996

I am writing to discuss your recent fax correspondence with Sandra Schubert in regard to discrepancies between (1) the FY 98 project cost estimates that appeared in Traci Cramer's September 9, 1996 memo addressing legislative authorization and (2) the FY 98 project cost estimates submitted to you more recently by ADF&G principal investigators. The numbers in Traci's memo are for the most part the numbers endorsed by the Trustee Council at its August 1996 meeting on the FY 97 Work Plan. These numbers either came from the Detailed Project Descriptions and detailed budgets submitted by the PIs or reflect the level of funding which the Council endorsed (and which I communicated to each PI by letter following Council action).

After reviewing the numbers in Traci's memo and the more recent ADF&G numbers, I do not find the discrepancy to be as big or mysterious as it first appeared to be. The attached spreadsheet summarizes the discrepancies on a project-by-project basis. (I have focused only on those projects for which Traci's number is lower than ADF&G's, and for which the difference exceeds $100.) You'll see that the new ADF&G numbers appear in most cases to reflect true differences of opinion over the appropriate level of funding for particular projects.

The discrepancies fall into a few categories:

- **Projects for which the Trustee Council's expectation of FY 98 funding is less than what the PI would like the Council to fund.** For example, in meetings with the Project 97210/Youth Area Watch proposer, I made it very clear that the most the Council was likely to fund in FY 98 was a continuation level of funding ($150,000) and that the amount of Council contribution to the project in future years would likely decline. At its August meeting, the Council endorsed

the $150,000; nonetheless, a higher number has recently been submitted to you. Projects 97131/Clam Restoration, 97225/Port Graham Pinks, and 97263/Port Graham Stream Enhancement also fall into this category.

- **Projects for which the Trustee Council has no expectation of funding in FY 98 or for which FY 98 funding has not yet been determined.** For example, the Council approved projects 97214/Harbor Seal Video and 97272/Chenega Chinook Release with the expectation that FY 97 would be the final year of Council contribution to the projects. Traci's memo includes 25 percent of the FY 97 authorization, which simply represents the quarter of the federal fiscal year that extends beyond the state fiscal year. Projects 97139A1/Little Waterfall, and 97427/Harlequin Duck Monitoring are projects for which FY 98 funding has not yet been determined. Traci's memo includes an FY 98 amount for each of these projects (the amount was taken from the FY 97 budgets), but only as a means of ensuring legislative authority exists should the Trustee Council decide to fund these projects again in FY 98. The new ADF&G numbers may be what the PIs hope to persuade the Council to fund.

- **Ecosystem projects that have agreed-to funding caps.** Projects 97163L and 97320E are subprojects of APEX and SEA respectively. For FY 98, the Council endorsed an overall budget cap for each of these ecosystem projects. Allocation of funds within the cap to the subprojects is the responsibility of the project leader. Traci's numbers are from the detailed budgets. Whether there will be some shifting of funds into 98163L and 98320E in FY 98 from other subprojects will be a decision of the project leader.

- **Projects with no apparent explanation for the discrepancy between the two numbers.** Traci's numbers for projects 97001/Harbor Seals, 97139A2/Port Dick, 97162/Herring Disease, 97170/Stable Isotopes, and 97196/Pink Salmon Genetics came from the detailed budgets and/or Detailed Project Descriptions. It is unclear what ADF&G's new numbers are based on. Per the FY 97 *Invitation to Submit Restoration Proposals*, page A3, the FY 98 numbers submitted in the DPDs were to be "an estimate of the amount of funding, if any, that will be requested for expenditure in FY 98."

I suggest that we take up these differences on a project-by-project basis during budget review next spring. In the meantime, I will not be too concerned if the numbers you submit for legislative authorization are greater than the numbers in Traci's memo. Higher numbers might build some flexibility into the legislative process and help ensure that ADF&G receives sufficient authority to cover whatever projects the Trustee Council ultimately funds ten months from now. What does concern me is that you and your staff and the PIs understand that submitting a higher number to the legislature does not imply that the Council expects to or is likely to fund a project for that higher amount.

Let me also say that I am aware of the difficulty PIs face in being asked to estimate FY 98 project costs a year in advance. The Trustee Council recognizes that estimates of future years' work are in fact estimates -- that project methodology and cost may need modification on the basis of each year's findings. However, to enable the Council to conduct long range planning, reliable estimates of project duration and cost are essential. These future year estimates have also proven useful in achieving budget discipline. A number of FY 97 projects received more funding than they had earlier estimated they would need. However, encouraging PIs to stay within the estimates and requiring a compelling justification to exceed the estimates allowed us to reduce the originally-submitted FY 97 budgets by over $1 million, thus allowing the Council to fund a number of new projects in FY 97.

Please give me a call if you would like to discuss any of this further.

Attachment

DIFFERENCES IN FY 98 FUNDING:
TRACI'S MEMO vs. PIs' RECENT SUBMITTAL TO ADFG

Number	Project Title	Number from Traci's 9/9/96 Memo	New Number from PI	Difference		Notes
97001	Harbor seal (Castellini)	$48.1	$51.5	$3.4		Traci's number is from detailed budget and noted in 9/11/96 letter from Molly to PI
97131	Clams	$365.0	$405.2	$40.2		TC expectation for FY98 is to fund at FY97 level of $365.0
97139A1	Little Waterfall	$23.0	$26.1	$3.1		TC undecided for FY98; Traci's number (from FY97 detailed budget) was to ensure adequate authorization in event is funded
97139A2	Port Dick	$49.7	$55.2	$5.5		Traci's number is from detailed budget and noted in 9/11/96 letter from Molly to PI
97162	Herring disease	$437.6	$458.7	$21.1		Traci's number is from detailed budget and noted in 9/11/96 letter from Molly to PI
97163L	APEX	$29.0	$33.4	$4.4		Traci's number is from detailed budget; needs to fit within APEX "cap" of $1.8 million
97170	Stable isotopes	$110.0	$117.7	$7.7		Traci's number is from DPD and noted in 9/12/96 letter from Molly to PI
97196	Pink genetics	$130.0	$134.5	$4.5		Traci's number is from detailed budget and noted in 9/12/96 letter from Molly t PI
97210	Youth Area Watch	$150.0	$187.3	$37.3		TC expectation for FY98 is to fund at FY97 level of $150.0
97214	Harbor seal video	$3.0	$71.7	$68.7		TC has no expectation of funding project in FY98; Traci's number is 25% of the FY97 authorization and represents the quarter of the federal fiscal year that extends beyond the state fiscal year
97225	Port Graham pinks	$75.0	$77.8	$2.8		Amount was specified in Molly's 9/9/96 letter to PI
97239	Salmon carcass	$127.5	$134.5	$7.0		At time Traci's memo was prepared project was deferred. Recommendation now is to not fund
97247	Kametolook River	$18.9	$21.1	$2.2		At time Traci's memo was prepared project was deferred. FY 98 estimate is now $13.8 (per 11/13/96 detailed budget)
97254	Delight/Desire	$123.1	$129.3	$6.2		At time Traci's memo was prepared project was deferred. Recommendation now is to not fund
97263	Port Graham streams	$115.0	$123.0	$8.0		Amount was specified in Molly's 9/12/96 letter to PI

DIFFERENCES IN FY 98 FUNDING:
TRACI'S MEMO vs. PIs' RECENT SUBMITTAL TO ADFG

97272	Chenega chinook release	$11.3	$45.0	$33.7		TC has no expectation of funding beyond FY97; Traci's number is 25% of FY97 authorization and represents the quarter of the federal fiscal year that extends beyond the state fiscal year
97320E	SEA - Predation	$282.1	$312.0	$29.9		Traci's number is from detailed budget; needs to fit within SEA "cap" of $1,947.2
97427	Harlequin ducks	$265.0	$269.3	$4.3		TC undecided for FY98; Traci's number (from FY 97 detailed budget) was to ensure adequate authorization in event is funded
NOTE: This list does not include projects whose difference is less than $1.0 (sum $3.4), or for which Traci's number is higher than the PI's (-$39.5).						

Exxon Valdez Oil Spill Trustee Council
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645 G Street, Suite 401, Anchorage, Alaska 99501-3451
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MEMORANDUM

To: Carol Fries, DNR
Ken Holbrook, USFS
Lisa Thomas, USGS

From: Stan Senner, Science Coordinator

Subject: Draft Final Report, 95060, on Spruce Bark Beetles

Date: November 18, 1996

There have been several queries about Steve Albert's draft final report on the "Spruce Bark Beetle Infestation Impacts on Injured Fish and Wildlife Species." This report is now with Bob Spies and is out for technical review as part of the normal peer review process.

A copy of the draft report is enclosed. If there are persons in your agency (e.g., participants in the interagency working group) who would like to review this draft and provide **technical** comments, please direct any feedback me, preferably no later than Monday, December 16. Thank you.

encl: (1)

cc: Molly McCammon, Executive Director
Robert Spies, Chief Scientist
Claudia Slater & Steve Albert, ADFG

Exxon Valdez Oil Spill Trustee Council

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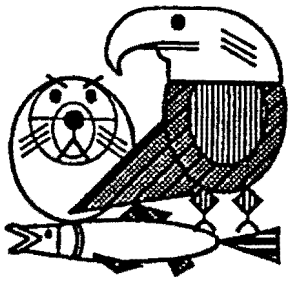

MEMORANDUM

TO: Diane Kochendorfer
Property Manager
Division of General Services
Department of Administration

FROM: Traci Cramer
Administrative Officer

DATE: November 18, 1996

RE: Transfer of EVOS equipment

The purpose of this memorandum is two-fold. First, to provide additional information you requested regarding the *Exxon Valdez* Oil Spill Trustee Council. Secondly, to confirm that when a request is made to transfer equipment from the State of Alaska to the a federal agency, that the transfer fee will be waived for equipment initially purchased with *Exxon Valdez* Oil Spill Settlement Funds.

The *Exxon Valdez* Oil Spill Settlement Funds are derived from a civil settlement resulting from the *Exxon Valdez* oil spill and are controlled by the *Exxon Valdez* Oil Spill Trustee Council. The Trustee Council consists of three state and three federal Trustees. In accordance with the settlement, the Trustee Council approves the expenditure of funds. In some cases, this includes funding to purchase equipment.

To maximize the restoration benefit, it is the policy of the Trustee Council that equipment acquired with settlement funds be used for activities approved by the Trustee Council. While the Trustee Council Procedures allow an agency to use the equipment for other agency purposes, first preference must be given to restoration projects for which funding is approved by the Trustee Council. For your reference a copy of that portion of the procedures that relates to equipment is attached.

Recently the Alaska Department of Fish and Game submitted a request to transfer various pieces of equipment to the U.S. Department of Agriculture, Forest Service. Consistent with departmental policy, a fee of $5.00 was assessed for each piece. It is requested that the fee be waived for this transfer and all subsequent transfers.

If you have any further questions, give me a call at (907) 586-7238.

cc: Dugan Petty
Molly McCammon

2. *Close-Out Period.* During the months of October, November and December agencies may pay from prior year funds an expense that was undisclosed during the fiscal year just ended. In addition, agencies may establish obligations to accommodate an expense that was undisclosed during the fiscal year just ended. By January 31 of each year, agencies shall report to the Executive Director the total expended for each project, plus any obligations relating to the fiscal year just ended. For further information regarding the Annual Financial report, refer to the Reporting section of these procedures.

3. *Reimbursement for Prior Year Expenses.* Expenses discovered after the Close-Out Period may be charged to the subsequent year's project budget. In the event the agency determines that insufficient funds are available to charge the expense to the subsequent year's budget, or the expense relates to a completed project, authority to adjust a prior year Final Report is required. During the months of January through June, adjustments relating to a prior year Final Report may be approved by the Executive Director. All expenses discovered after June require Trustee Council action.

EQUIPMENT

1. *Title.* Subject to the conditions set forth in this section, title to equipment acquired with Joint Trust Funds is retained by the respective governmental agency. In the event equipment is transferred between governments, title to the equipment shall also be transferred.

2. *Use.* Equipment shall be used for the project for which it was acquired. When no longer needed for the original project, the equipment may be used in other activities for which funding was approved by the Trustee Council. The equipment may also be used for other agency purposes, providing that first preference is given to restoration projects for which funding is approved by the Trustee Council.

3. *Inventory.* Property records shall be maintained in accordance with agency procedures.

4. *Repair, Maintenance and Safeguarding.* The repair, maintenance and safeguarding of equipment purchased with joint funds shall be accomplished in accordance with agency procedures.

5 *Disposal.* Equipment that ceases to function or have value shall be disposed of in accordance with agency procedures.

PROFESSIONAL SERVICES CONTRACTS

1. *General.* Agencies shall ensure that professional services are accomplished in accordance with the terms, conditions, and specifications of the project approved by the Trustee Council. In the event the approved motion of the Trustee Council specifically identifies an entity to carry-out the project and the contracting agency determines that an award to an entity, different than that

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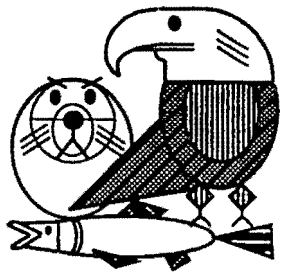
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

To: Gina Belt, Maria Lisowski, Barry Roth, and Alex Swiderski

From: Molly McCammon, Executive Director

Subject: Data Ownership and Archiving

Date: November 15, 1996

From time to time questions arise about the ownership and maintenance of data and other products from restoration projects. The *Restoration Plan* makes clear that since the restoration program is funded by public money the public owns the results of restoration projects.

It would be useful if we could amplify this policy for the benefit of our investigators and for those people who in the future will apply to receive restoration funds. I plan to discuss the attached draft statement at the Restoration Work Force meeting scheduled for Wednesday, November 20. This item is also on the agenda for the December 6 meeting of the Trustee Council.

The intent is to state more clearly what I believe is already a matter of state and federal law. If the Trustee Council adopts some version of this statement, we may need to add some "boilerplate language" to any state or federal contracts or agreements to carry out restoration projects. We can discuss this following the Trustee Council meeting.

Would you please review the attached and give either me or Stan Senner any comments before the Work Force meeting next week.

encl: (1)

DRAFT

According to Policy Number 20 in the *Exxon Valdez Oil Spill Restoration Plan* (November 1994):

> **Restoration must reflect public ownership of the process by timely release and reasonable access to information and data.**
>
> Information from restoration projects must be available to other scientists and to the general public in a form that can be easily used and understood. An effective restoration program requires the timely release of such information. This policy underscores the fact that since the restoration program is funded by public money, the public owns the results.

We now propose to clarify this statement of Trustee Council policy by adoption of the following:

> Therefore, consistent with state and federal laws, the public owns any data or other products resulting from any project to which the Trustee Council has contributed financially. Data means recorded information, regardless of form or the media on which it is recorded, including computer programs, data bases, and software. Each final report on a restoration project shall include a brief description of data gathered in the project, including definition of the types of data gathered, the form or forms in which the data are recorded, the location of the data, and a permanent contact at a public institution such that the data are accessible to the public, including scientific users, after completion of the project.

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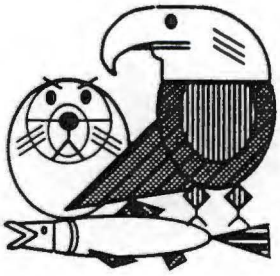

FAX COVER SHEET

FAXED

To: See distribution Number:

From: Molly McCammon Date: November 15, 1996

Comments: Total Pages: 3

To: Gina Belt
Maria Lisowski
Barry Roth
Alex Swiderski

HARD COPY TO FOLLOW _____

Document Sent By: Keri

3/27/96

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*** MULTI TRANSACTION REPORT ***
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TX/RX NO. 0507

INCOMPLETE TX/RX

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	[43] 19075867251	M.LISOWSKI
	[45] 12022083877	B.ROTH

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November 15, 1996

Brad Warren
Editor
Pacific Fishing
1515 N.W. 51st Street
Seattle, WA 98107

Via Fax: 206-784-5545

Re: Letter to the Editor

Dear Editor,

The return of Pacific herring to Prince William Sound is good news to everyone. The sudden population crash in 1993 was an ecological puzzle for scientists and an economic disaster for families who count on the fishery for their livelihoods.

Your September issue did a good job explaining how intensive scientific study successfully identified the virus which caused the crash. But the work is not done. Research is continuing to determine the factors which triggered the massive spread of the disease. In this way fisheries managers might be able to avoid a repeat of the crash in Prince William Sound or elsewhere.

This herring research is a good example of our increasing knowledge about the North Pacific and its natural inhabitants, thanks in part to the restoration program of the Exxon Valdez Oil Spill Trustee Council. The oil spill illustrated how little we know about the sea. One goal of the Trustee Council is to reverse that sad truth.

Using the $900 million civil settlement with Exxon, we are gaining a world of scientific knowledge once thought unachievable due to funding constraints. Scientists are in the field maintaining a system-wide approach to research to learn how each species interacts with others in its cold-water environment.

In addition, funds are being used to protect vital habitat for fish, seabirds and marine mammals, improve subsistence harvests, open up new spawning grounds to increase the number of returning salmon and provide more recreational access to lands.

In the end, the Trustee Council plans to leave approximately $150 million (including interest) in a reserve account to fund future restoration efforts. One use for the money could be to establish an endowment to fund marine research in the spill area for many years to come.

If the oil spill is a sow's ear, then the restoration effort is certainly the silk purse made from it.

Sincerely,

Molly McCammon
Executive Director

Exxon Valdez Oil Spill Trustee Council
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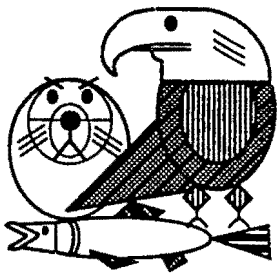

November 14, 1996

Editor
BioScience
1444 Eye Street, NW - Suite 200
Washington, DC 20005

Dear Editor:

John Wiens ("Oil, Seabirds, and Science," *BioScience* 46:587-597) is critical of the policies and work of the Trustees and scientists representing the United States and Alaska governments following the *Exxon Valdez* Oil Spill (hereafter, EVOS). The Trustees' damage assessment and restoration programs following the spill are open to public scrutiny and must be judged on their merits, but I was surprised by Wiens' adversarial tone and one-sided, sometimes misleading content. My comments concern the policy aspects of Wiens' article:

Wiens misrepresents Trustee policies on the definition and goals of recovery. He criticizes the concept of returning to pre-spill conditions or to conditions comparable to those of non-oiled areas as a static view of populations and ecosystems. This criticism is baseless because his view of ecosystems as dynamic is shared by the Trustees and is explicitly recognized in their draft and final restoration plans (EVOS Trustee Council 1993, 1994). Wiens fails to note that the Trustees' real goal is a return to conditions that would have existed had there been no oil spill--a vastly different concept than the one he attributes to the Trustees. Pre-spill conditions are used as proxies because of the difficulty in predicting what conditions would have existed absent the spill. The Trustees also recognize that a return to pre-spill conditions is unrealistic for populations that had declined or were declining at the time of the EVOS (e.g., marbled murrelet *Brachyramphus marmoratus*).

Wiens (1995, 1996) proposes that if injury cannot be detected statistically, then no injury occurred; recovery is achieved when previously documented statistical differences disappear. These "Hear-no-evil, see-no-evil..." definitions are good when data are ample; they also are convenient for an industry trying to limit its legal and economic liability. Realistically, it is difficult to detect significant effects when baseline data are limited, natural variability is high, and interpretation of off-site controls is complicated. In the absence of a convincing analysis of power, Peterson (1993) suggests that definitive conclusions about no effects are unjustified.

Wiens speculates about why scientists disagree about the EVOS impacts on seabirds. In doing so, he misrepresents the Trustees' approach to the initial damage assessment, alleging that U.S.

laws "dictate documentation of only damages" (p. 594). The Trustees' natural resource damage assessment was largely guided by the Comprehensive Environmental Response, Compensation, and Liability Act (Wiens cites the Oil Pollution Act, which wasn't law yet, and the Clean Water Act, which was of lesser importance): documentation of both injury and rates of natural recovery are required, and recovery was a concern from the outset (e.g., Trustee Council 1989). To be sure, Trustee-sponsored studies on seabirds during 1989-1991 focused on injuries for the simple reason that there can be no recovery if there was no injury. Studies that showed no or weak evidence of injury, due to no spill effect, poor science, lack of baseline data, or other factors were dropped. Studies that showed reasonable evidence of injury were sustained. Contrary to Wiens' assertion that emphasis on damages was intensified, it is the emphasis on restoration that has been intensified. In some cases the Trustees have sustained studies for eight years now, because of the need and responsibility to document recovery. Indeed, recovery and restoration have been the basis of the entire program since the out-of-court settlement with Exxon in October 1991.

Wiens describes how advocacy, litigation, and the news media can erode the scientific process. This is not news, and Wiens goes too far by implying that somehow these factors only pertain to the Trustees and their scientists and not to the Exxon Company, USA and its contractors. With reference to Exxon, of course, there is the added influence of wanting to limit legal and economic liabilities. Wiens is critical of dramatic, unsupported statements on the part of Trustee-sponsored scientists, but makes no attempt to apply the same standards and identify "science-advocacy interactions" (p. 595) on the part of Exxon and its contractors (e.g., Baker et al. 1990).

I was pleased to see Wiens' recognition that seabird populations may experience cumulative impacts from a series of natural (e.g., *El Nino* events) and anthropogenic (e.g., oil spills) environmental changes, but he is far too quick to conclude that "this scenario does not appear to have happened as a result of the *Exxon Valdez* spill" (p. 594). How does he support this conclusion? Is this a bit of advocacy-science interaction creeping in? The EVOS was superimposed on decadal-scale environmental changes in the northern Gulf of Alaska (e.g., Piatt and Anderson 1996). Resource managers, scientists, and people who derive their living from the sea are concerned about the long-term health of a constellation of fish-eating marine birds and marine mammals. There is good reason to suspect that the combined effects of the oil spill and natural environmental change may be part of the problem.

In 1995, in the interests of improving the restoration and science program, the Trustees supported an unsolicited proposal from the Pacific Seabird Group--a respected, independent organization of seabird biologists--to convene a group of the world's experts to review the EVOS restoration and injury assessment. Not incidentally, Wiens and other Exxon contractors were invited, but Wiens did not attend. The final report from this workshop of experts will be available soon, and I look forward to their criticisms and recommendations. Indeed, the Trustees welcome criticisms that are informed, balanced, and constructive--attributes that I did not find in the Wiens paper.

Finally, a word to the Editor of *BioScience*: it is not evident that anyone closely familiar with the policies and actions of the Trustees nor the work of the hundreds of highly-qualified, well-published scientists sponsored by the Trustees reviewed a draft of Wiens' manuscript. I am not familiar with your peer-review process, but it would seem only fair--essential, even--to have someone "inside" the Trustees' spill-science program comment on a draft of Wiens' paper. Thank you.

Sincerely,

Molly McCammon
Executive Director

References cited:

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Exxon Valdez Oil Spill Trustee Council. 1993. Draft *Exxon Valdez* oil spill restoration plan. *Exxon Valdez* Oil Spill Trustee Council, 645 G Street, Suite 400, Anchorage, AK 99501.

Exxon Valdez Oil Spill Trustee Council. 1994. Draft *Exxon Valdez* oil spill restoration plan. *Exxon Valdez* Oil Spill Trustee Council, 645 G Street, Suite 400, Anchorage, AK 99501.

Peterson, C.H. 1993. Improvement of environmental impact analysis by application of principles derived from manipulative ecology: lessons from coastal marine case histories. Australian J. of Ecology 18:21-52.

Piatt, J.F. and P. Anderson. 1996. Response of common murres to the *Exxon Valdez* oil spill and long-term changes in the Gulf of Alaska marine ecosystems. Pages 720-737 *in* Rice, S.D. Spies, R.B., Wolfe, D.A. Wright, B.A., eds. *Exxon Valdez* Oil Spill symposium proceedings. Symposium no. 18, Bethesda (MD): American Fisheries Society.

Trustee Council. 1989. State/federal natural resource damage assessment plan for the *Exxon Valdez* oil spill: public review draft. *Exxon Valdez* Oil Spill Trustee Council, 645 G Street, Suite 400, Anchorage, AK 99501.

Wiens, J.A. 1995. Recovery of seabirds following the *Exxon Valdez* oil spill: an overview. Pages 854-893 *in* Wells, P.G., Butler, J.N., Hughes, J.S., eds. *Exxon Valdez* oil spill: fate and effects in Alaskan waters. ASTM Special Technical Publication no. 1219, Philadelphia (PA): American Society for Testing and Materials.

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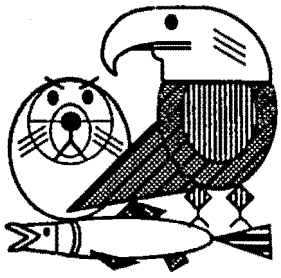

November 14, 1996

Senator Stevens
United States Senate
522 Hart Building
Washington, D.C. 20510-0201

Dear Senator Stevens:

Thank you for your recent letter regarding a proposed Marine Center project in Juneau. I have enclosed for your information a response to Ms. Stephenson's request for funding consideration.

Please let me know if I can be of any further assistance.

Sincerely,

Molly McCammon
Executive Director

enclosure

mm/raw

United States Senate

COMMITTEE ON
GOVERNMENTAL AFFAIRS
WASHINGTON, DC 20510-6250

November 7, 1996

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

Dear Molly:

Enclosed is a copy of a letter from one of my constituents, Susan Stephenson, of the MARINE CENTER, regarding funding for her facility. I would appreciate it if you could address her questions regarding funding sources. I have also contacted the National Oceanic and Atmospheric Administration for their response. Thank you for your time and attention to this matter.

With best wishes,

Cordially,

Ted Stevens/maa

TED STEVENS

P.S. Senator Stevens is travelling during this period between Congressional sessions.

283643 RRR 16000

The
MARINE CENTER

October 21, 1996 96 OCT 25 PM 2:09

PO Box 34782
Juneau, Alaska 99803
Voice/Fax (907) 364-2806
endeavor@ptialaska.net

The Honorable Ted Stevens
522 Hart Building
Washington DC 20510-0201

Dear Senator Stevens:

The purpose of this letter is to introduce myself to you and to familiarize you with a project that I have been developing for two years. It is called The MARINE CENTER and will be a not-for-profit facility located in Juneau. Its purpose is to augment the marine experience shared by the residents and visitors of Southeast Alaska.

I believe this project will be an asset to our community for several reasons. It will provide a focus for the residents of Juneau to explore and expand their knowledge of the biodiversity which surrounds us. Its mission will be to provide information about Alaskan marine mammals and their habitat and to foster personal responsibility for the conservation of our natural local and global resources. It will provide an element of tourism which is lacking in Southeast Alaska. That is, it will interpret and expand the wildlife experiences sought by our half-million, multi-national annual visitors. It will add through that facet a significant component to the tourism industry and the economic development of Juneau.

I anticipate funding through several sources. I recently sent 31 query letters to major charitable foundations throughout the United States. My problem statement is based upon the need to provide the public with an understanding of the responsibility of the individual to develop behaviors which will conserve our natural resources. Because of the volume of visitors to Juneau, and potentially to The MARINE CENTER, the opportunity to inform substantial numbers of an international public presents itself. I have written to Ms. Molly McCammon, Executive Director of the Exxon Valez Oil Spill Trustee Council, to determine the potential for assistance from the settlement fund which allocated $35 million dollars for public information. I believe that because Juneau is the capital city of Alaska, a "chapter" for their efforts would be well represented here and would dovetail perfectly with the mission of The MARINE CENTER. I enclose copies of that letter and a Tides Center letter of acceptance for sponsorship to further describe this project and my efforts.

I will appreciate any thoughts or assistance you might have for the development of The MARINE CENTER. I will be happy to provide you with more information and copies of grant applications. Thank you for your time and consideration on behalf of The MARINE CENTER.

Sincerely,

Susan Stephenson

Susan Stephenson
Executive/Development Director

Enclosures

Exxon Valdez Oil Spill Trustee Council
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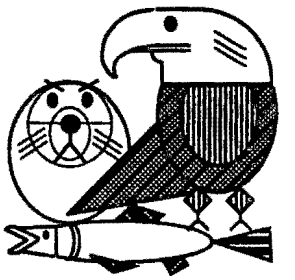

MEMORANDUM

TO: Agency Liaisons

FROM: Molly McCammon, Executive Director

DATE: November 14, 1996

SUBJ: Equipment Inventories

The purpose of this memo is to remind agencies that equipment inventory reports are due at the end of the calendar year. As provided by the *Procedures* adopted by the Trustee Council on August 29, 1996, Trustee agencies are to provide an inventory of equipment purchased with settlement funds, valued at a cost of $1,000 or more, as well as other sensitive items to the Executive Director by December 31st of each year. Sensitive items include firearms, audio/visual equipment, computers and cameras.

The inventory report is to include a listing of: 1) equipment purchased during the fiscal year just ended, 2) the reassignment of equipment to other activities funded by the Trustee Council, 3) any equipment currently being used for other agency purposes; and 4) all equipment that has ceased to function or have value including the identification of equipment that was disposed of during the prior fiscal year.

For your reference, please find attached the most current agency equipment inventories on record with the Restoration Office.

Agency	Inventory Date	Agency Contact
ADFG	November 12, 1995	Claudia Slater
ADEC	January 30, 1994	David Bruce
ADNR	February 16, 1996	Carol Fries
USFS	December 26, 1995	Dave Gibbons
NOAA	April 9, 1996	Byron Morris
USDOI (FWS/NBS)	March 21, 1996	Catherine Berg

It is requested that the inventory be organized into two reports:

- Report A: equipment with value as of September 30, 1996

The USFS and NOAA inventories provide a good model for reporting. Both include the basic information about each equipment item that is necessary to make the inventory useful:

— description of the equipment item
— indication of property value ($)
— government property tag number
— serial number
— physical location
— whether the equipment is currently in use (by restoration project number);
— whether it is anticipated for use in the next fiscal year (by restoration project number);
— acquisition date;
— indication of equipment condition (excellent, good, poor); and
— custodian name and phone number for contact.

- Report B: equipment that has ceased to function, was disposed of, or lost during FY 96

As you will recall, the FY 95 audit recommendations identified a need to strengthen the Trustee Council's property inventory management and tracking practices. That's why the inventory management section of the *Procedures* was revised. This is an issue that will continue to receive on-going scrutiny during the next audit cycle.

Your assistance with this effort is appreciated.

attachment

cc: Traci Cramer
Eric Myers

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178

MEMORANDUM

TO: Public Advisory Group

FROM: Molly McCammon, Executive Director

DATE: November 13, 1996

SUBJ: Public Advisory Group meeting — December 3, 1996

Please note that there will be a teleconference for the Public Advisory Group:

11:00 am - Tuesday, December 3, 1996
Anchorage: Restoration Office
645 G Street — 4th floor conference room
Juneau: Restoration Office
Federal Building — room 225

The purpose of the meeting will be to obtain PAG comment on issues that will be considered at the next Trustee Council meeting on December 6. A working draft agenda is provided below:

PUBLIC ADVISORY GROUP
11:00 am — Tuesday, December 3, 1996

1. Deferred FY 97 Work Plan projects
2. NRDA project reports
3. Review of December 6 Trustee Council meeting items
   - — TEK protocols
   - — Data Ownership and Archiving Policy
   - — Invitation for Archeology Project Proposals
   - — Restoration Reserve Planning
   - — Habitat Protection Program
4. Discussion of Spruce Bark Beetle as it pertains to restoration efforts

Please contact Cherri Womac at the Restoration Office (1-800-478-7745) to confirm whether you will be able to participate. PAG members are encouraged to meet at the Restoration Office (in Anchorage or Juneau). Others should contact Cherri to get the bridge number to dial in.

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MEMORANDUM

TO: Dave Gibbons/USFS

FROM: Molly McCammon
Executive Director

RE: Authorization: Project 97007B-CLO/Site Specific Archaeological Restoration

DATE: November 13, 1996

The purpose of this memorandum is to formally authorize work to proceed on Project 97007B-CLO/Site Specific Archaeological Restoration. All work must be performed consistent with the revised Detailed Project Description.

cc: Ray Thompson

Exxon Valdez Oil Spill Trustee Council
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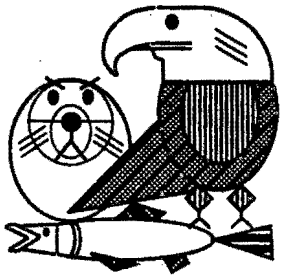

MEMORANDUM

TO: All Staff

FROM: Molly McCammon, Executive Director

DATE: November 13, 1996

SUBJ: Staff Meeting — November 19, 1996

There will be a Restoration Office **staff meeting and training session on Tuesday, November 19, 1996 starting at 1:00 pm** in the fourth floor conference room. All staff should plan to attend.

The first part of the meeting will include review of some training videos concerning ethics and sexual harrassment laws. After that, we will continue with a general review and update of restoration efforts.

Specific items I want to review include:

- update on the habitat protection program
- Restoration Reserve planning
- planning for the 1997 and 1999 Restoration Workshops
- FY 1998 *Invitation*
- Media/Public Outreach/Community Involvement

If we run out of time on Tuesday, we will continue the meeting on Wednesday or Thursday afternoon.

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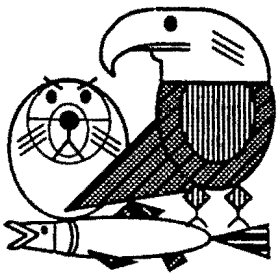

MEMORANDUM

To: Brenda Baxter, Mike Castellini, John French, Dave Gibbons, Bill Hauser, Joe Hunt, Jim King, Jeep Rice, Bob Spies, Joe Sullivan, Lisa Thomas, Ray Thompson, Martha Vlasoff, and Bruce Wright

From: Stan Senner, Science Coordinator Stan

Subject: Summary of October 24 10th-Anniversary Planning Meeting

Date: November 12, 1996

We had good participation in our 2nd anniversary planning meeting. Thank you for an excellent meeting. I have enclosed a meeting summary, which was reviewed by Brenda and Bruce. If I have overlooked or misrepresented any key points, please let me know and I will circulate a revised version.

Please remember to send Brenda Baxter any final comments on the logo designs (enclosed).

encl: (1)

cc: Molly McCammon
Restoration Liaisons & Work Force

10th Anniversary Science Symposium
Planning Meeting
October 24, 1996

Meeting Summary[1]

Review symposium's basic themes, content, and organization

The basic content of the symposium, as developed to date, was affirmed. That is the symposium will consist of a one-day event geared toward the general public, followed by a four-day meeting that will be somewhat more technical in content. The one-day public session should include a variety of overview presentations, including habitat protection, socioeconomic impacts, injury and recovery, the benefits of the restoration program, and prevention and response. In planning this session, it may be helpful to pose three questions: (1) how have the settlement funds been used? (2) what has been learned? and (3) what has been done to prepare for and prevent oil spills in the future? This last item is not specific to the Trustee Council, but will be a matter of considerable public interest.

The subsequent technical sessions will largely revolve around the following themes: (a) long-term view of injury and recovery (i.e., nearly a decade of work), (b) what we have learned about the ecosystem, and (c) long-term benefits of the restoration program (i.e., the scientific legacy and applications). Under the heading of long-term views on injury and recovery, scholarly papers on socioeconomic impacts will be appropriate. There also was discussion about inviting papers on prevention and response. We thought that this may be appropriate--perhaps in a session that would be concurrent with others--but that this topic should be among the principal themes of the technical symposium.

Finally, there was interest in knowing what other anniversary events may take shape in addition to the symposium. It is important that we know what these are, because they may bear on planning or logistics for the symposium that is the responsibility of this planning committee.

Milestones and Timetable

A copy of a draft time line prepared by Brenda is attached. We discussed the need to circulated an early announcement about the symposium at the 1997 Restoration Workshop. This same announcement could be posted on the OSPIC "home page." We also discussed moving the due date for abstracts from April 1 to March 15, 1998.

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[1]Persons present or on the telephone were: Brenda Baxter, Mike Castellini, John French, Joe Hunt, Lisa Ka'aihue, Jeep Rice, Stan Senner, Robert Spies, Joe Sullivan, Lisa Thomas, Ray Thompson, Martha Vlasoff, and Bruce Wright.

Review Logo Sketches

There was extended discussion about an anniversary symposium logo. The group settled on some version of the text-only logo: "Legacy of an oil spill - 10 years after Exxon Valdez." Various versions of this are attached. Please send your comments to Brenda (FNBD@aurora.alaska.edu; fax 907/474-6285) no later than Friday, November 29.

Revisit alternatives for symposium proceedings

To date, our thinking has been that we would do a standard peer-reviewed symposium proceedings, with the aim of having the volume in print one year after the anniversary. Stan described an alternative approach, which is to publish in book form a series of invited peer-reviewed synthesis papers, to be available at the time of the anniversary. After extended discussion, there was strong support for this approach, subject to further analysis of timetables, costs, and other details. A copy of Stan's summary of the alternatives is attached. It was agreed that a decision on the publication type is fundamental and must be made quickly (within a few weeks), because the approach selected has significant impact on the overall timeline.

Subsequent to the regular planning meeting, Bruce, Joe S., and Stan met to review the issues and timeline. We continue to think that the synthesis approach is best, although such issues as the timeline and costs must be considered further. If we do choose the synthesis approach, we need to move quickly. Once the basic decision is made, we then need to make a series of decisions regarding choice of publisher, chapter authors, peer review, etc.

Note that whatever type of publication is chosen would be in addition to a booklet of abstracts of presentations (oral and poster) made at the symposium. These abstracts would be available at the time of the symposium.

Subcommittee reports

Steering: The major item was that space at the Egan Center has been secured. Following the meeting Brenda, John, Eric Myers, and Stan walked through the Center with staff from the Center and the Anchorage Visitor and Convention Bureau.

Field trips: No action to date. We discussed the need to contact the Alaska Railroad very soon in regard to connections and options for getting a group to Seward to visit the Alaska SeaLife Center.

News media: Joe H. has a subcommittee and had prepared a handout, which is attached. Some of Joe's questions were discussed. In regard to (B), whether to add "controversy and conflict" to the symposium, the general view was that controversy and conflict will take of itself, but that there is no point in programming it in: Nearly all of the restoration policy decisions will have been made by March 1999 (i.e., why debate old decisions at that point?).

Editorial/proceedings: See discussion above regarding publication alternatives.

Scientific program: Mike C. and Jeep R. are the core of this subcommittee. At a minimum, however, their role will involve review of abstracts and subsequent organization of the program sessions. They also are likely to be significantly involved in review of synthesis papers, if that publication option is chosen. They need closure on the publication question before they can do much more.

Day-one symposium: Lisa T. has named a committee, which will meet soon (November 14).

PWS RCAC Participation

The board of the Prince William Sound RCAC has agreed to be a nonfunding cosponsor of the symposium. Their particular interest is in the day-one symposium and in the prevention-and-response theme. Question was raised about participation by the Cook Inlet RCAC, but they have not yet been contacted (Stan's fault!).

Other items

Two questions that need to be addressed by the Work Force are:

-will there be a January 1999 Restoration Workshop?

-what will be required in the way of reports and DPDs in the spring of 1999?

attachments (4)

EVOS 10—The Legacy of an Oil Spill

10th Anniversary Scientific Symposium Planning Timeline Draft

1996	
Jun	1st planning meeting
Jul	space contract signed
Oct	logo finalized
Oct	2nd planning meeting
1997	
May	call for paper complete and printed
May	identify and invite guest speakers
Jun	1st call for papers mailing
1998	
Jan	2nd call for papers mailing
Apr 1	abstracts due
Apr 1-15	abstracts reviewed by committee
Apr	Seward field trip set up, materials for other trips set in motion
Apr	catering orders set
Apr	registration fee set
Apr	proceedings editorial and publishing commitments tied down
May 15	ms preparation instructions completed
May 15	oral and poster presentation instructions completed
May 15-30	program organized (sessions and session chairs scheduled)
Jun 1	final acceptance of papers and posters
Jun	1st registration brochure mailing
Jul	field trip materials available from vendors
Oct-Jan '99	paid ads run, if any
Nov 1	ms due
Nov 1-15	ms sent for peer reviews
Nov	2nd registration brochure mailing
1999	
Jan-Feb	finalize abstract book and printed program
Jan	ms reviews return
Feb - Mar 15	editors review ms and reviews and request revisions from authors
Feb 15	abstract book printed
Mar 1	advance registration cut-off
Mar 1	program printed
Mar 1	news media packets mailed
Mar 23	symposium
Apr 1	final electronic copy of ms due to technical editor
2000	
Mar	proceedings available

LEGACY
OF AN OIL SPILL
10 YEARS
AFTER
EXXON VALDEZ

LEGACY OF
AN OIL SPILL
10 YEARS
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Publication Options & Implications

	Option #1, Initial Concept	*Option #2, Proposed Now for Discussion*
Type	proceedings	synthesis
Participation	open to all presenting papers	invited contributors only
Content	primarily individual projects	integration of related projects
	mixture of damage assessment, restoration & ecological synthesis	also a mixture, but emphasis on integration of 10 years of work on species, communities & ecosystems
Length	like '93 volume--perhaps 900 pp	shorter--perhaps 300 pp
Implications for Symposium	(same as for content on proceedings)	emphasis on post-1993 work for talks on individual projects; most sessions to be opened with overview talk, which comes from the published syntheses
Abstract	available at symposium; includes abstract from each presenter	same
Timing of Publication	1 year after symposium	available at symposium
Publisher	TBD, but something like Amer. Fish. Society in cooperation with Alaska Sea Grant and with $ of EVOS TC	same?
Peer review	yes	yes
Editors	Alaska Sea Grant provides managing editor; scientific role handled by combination of EVOS TC and AFS?	same?

Note: *Under both options, investigators presenting results of individual projects will be encouraged to publish their work in the open, peer-reviewed scientific literature.*

October 23, 1996

News Media Subcommittee

Members: Joe Hunt (chair)
Patty Ginsberg (RCAC)
Chris Beck (PAG)
Lisa Thomas (Field Trips/Day One)
Alaska SeaLife Center representative

<u>Three Questions</u>

The general portion of the symposium should provide a thorough response to three basic questions

1) Restoration. Ten years later, how is the recovery going?

2) The Process. How did Trustee Council spend the $900 million? What were the priorities? What lessons were learned in the process?

3) Prevention. Can an Exxon Valdez-type oil spill happen again? If it does, are we better prepared?

<u>Ponderables</u>

A) Scope of media preparation will depend largely on who will be attending the event as keynote speakers.

1) Clinton or Gore?
2) Secretaries of Interior/Agriculture?

B) Do we want to add controversy and conflict to the symposium?

1) Put together a panel discussion or debate that includes scientists and experts who disagree with scientific findings, habitat protection program, etc.
2) Encourage debate about buying and selling of Native land.
3) Encourage debate about the NRDA process and new OPA90 regs.
4) Encourage debate about spill prevention and cleanup.

C) To include full discussion about prevention and cleanup, should we ask RCAC to take a much larger role in the symposium?

Media Planning

A) Early contact with organizations such as Outdoor Writers Association of America, Society of Environmental Journalists and the American Association of Science Writers might help them plan board meetings in Anchorage that coincide with the symposium. The mailing list for all three groups will be used to send announcements to all members.

B) Early invitations to electronic media can help them plan shows around the symposium. Television will be encouraged to film the summer preceeding the 10th anniversary.

1) Talk of the Nation/Science Friday
2) Nova
3) Frontline
4) Day One, PrimeTime, 60 Minutes, 48 Hours
5) C-Span, Discovery Channel

C) Prepare for the needs of the media.

1) Provide a press room with phones
2) Media Packet. Very detailed. Include names, titles, addresses, phone numbers of all participants.
3) Satellite hookups??
4) Record all events on audio with immediate duplication ability to make tapes available to media.
5) Anticipate number of cameras and prepare for them.

D) Field trip ideas of interest to the press.

1) SeaLife Center
2) Cordova ("the economic ground zero of the oil spill")
3) Alyeska Terminal
4) Ride through the Valdez Narrows and pass Bligh Reef on a tanker or on an escort vessel.
5) Potlatch in Chenega

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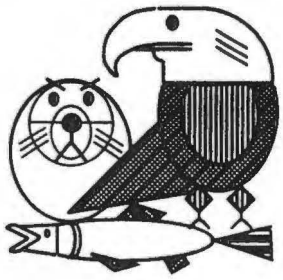

MEMORANDUM

TO: Restoration Work Force

FROM: Molly McCammon, Executive Director

DATE: November 8, 1996

SUBJ: Restoration Work Force Meeting — November 20, 1996

Please note that the next Restoration Work Force meeting will be:

9:00 am - Wednesday, November 20, 1996
Anchorage: Restoration Office
645 G Street
4th floor conference room
Juneau: Restoration Office
Federal Building - room 225

A draft agenda is provided below:

DRAFT AGENDA
RESTORATION WORK FORCE
9:00 am — Wednesday, November 20, 1996

1. Deferred FY 97 Work Plan projects
2. NRDA project reports
3. Review of December 6 Trustee Council meeting issues
   - — TEK protocols
   - — Data Ownership and Archiving Policy
   - — Invitation for Archeology Project Proposals
   - — Restoration Reserve Planning
   - — Habitat Protection Program
4. Discussion of Spruce Bark Beetle as it pertains to restoration efforts
5. Other Items

If there are other items you wish added to the agenda, please contact me as soon as possible.

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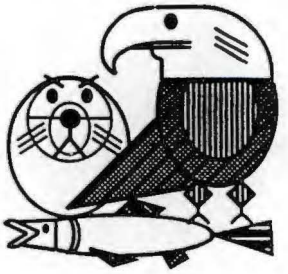

FAX COVER SHEET

FAXED

To: Restoration Work Force

From: Eric Myers Date: Nov. 8, 1996

Comments: Total Pages: 2

Please distribute to the list below:

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
Claudia Slater/Bill Hauser
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Piper, Ernie
Rice, Bud
Spies, Bob
Thompson, Ray
Wright, Bruce
Sullivan, Joe

HARD COPY TO FOLLOW NO FAX SENT BY: Tami

8/7/96

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*** MULTI TRANSACTION REPORT ***
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TX/RX NO. 0392

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TRANSACTION OK	[09] 19075867589	JUNEAU OFFICE
	[10] 19075867555	D.GIBBONS
	[13] 19077896608	MORRIS-WRIGHT
	[15] 2698918	CAROL FRIES
	[16] 2672450	RITA MIRAGLIA
	[17] 2713992	R.THOMPSON
	[18] 2672474	SULLIVAN-SLATER
	[19] 7863636	L.BARTELS
	[20] 7863350	C.BERG
	[21] 2572517	B.RICE
	[24] 2697652	E.PIPER
	[35] 15103737834	B.SPIES
	[38] 2715827	G.BELT

ERROR

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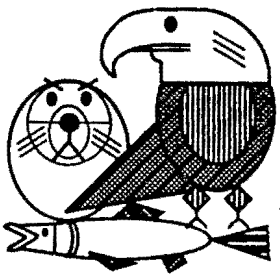

November 8, 1996

Mark Chase
Deputy Refuge Manager
POB 2139
Soldotna, Alaska 99669-2139

Dear Mr. Chase:

This is a belated thank you for all the work you and your staff put into our very successful float trip down the Kenai River on September 24. The logistics were very well prepared, making for an enjoyable trip in spite of the cold. The local knowledge you were able to provide participants was especially helpful. Congratulations and thank you for a job well done.

Sincerely,

Molly McCammon
Executive Director

cc: Deborah Williams, USDOI
Robin West, Kenai Wildlife Refuge Manager

mm/raw

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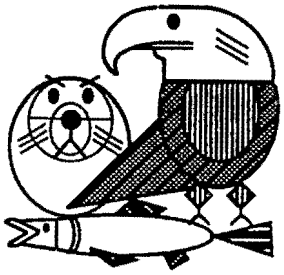

MEMORANDUM

To: EVOS Project Leaders and Principal Investigators

From: Molly McCammon, Executive Director

Date: November 6, 1996

Subject: 1997 Restoration Workshop and Call for Abstracts

The 1997 Restoration Workshop is scheduled for January 23-25, 1997, at the Hotel Captain Cook in Anchorage. All project leaders and principal investigators are expected to participate.

The main purposes of the Restoration Workshop will be to foster interdisciplinary interchanges among project personnel, update you on the status of the restoration program, and obtain insights that will guide the program in FY 1998 and beyond. This year's theme is "ecosystem research, modeling, and management." The keynote speaker will be Dr. Kai Lee, director of the Center for Environmental Studies at Williams College and author of *Compass and Gyroscope: Integrating Science and Politics for the Environment.*

As was the case last January, the entire meeting will be held in plenary sessions. There will not be time for oral presentations on all projects, and a memorandum requesting presentations on selected projects has been sent to the leaders and investigators for those projects. **However, the project leader or principal investigators for each project funded in FY 1996 should submit a one-page abstract to Stan Senner at the Restoration Office no later than Monday, December 16.** These abstracts will be duplicated, collated, and distributed in advance of the workshop and will provide everyone ready access to the full range of work supported by the Trustee Council. These abstracts were well received last January, and we look forward to having yours in time for the 1997 workshop. Please try really hard to write your abstract in plain English, since not everyone who reads these will be steeped in your subject matter.

In addition to an abstract for each paper, **we invite and encourage everyone not giving an oral presentation to prepare a poster paper,** which will be displayed in a room adjacent to the main meeting room. These posters will go a long way toward providing key information to your colleagues and the public. There will be a formal poster session combined with a reception on Thursday evening, January 23. When you submit your abstract, please also let Stan Senner know if you will be presenting a poster. Poster guidelines will be mailed with a draft agenda later in November.

Finally, workshop participants are responsible for their own lodging and travel arrangements. It is not too early to make your room reservations at the Hotel Captain Cook. From Alaska, call 1-800-478-3100. From outside of Alaska, 1-800-843-1950. Room rates are $75.00 single, $85.00 double (+ 8% tax). Ask for the rate for Group No. 52519.

We look forward to having your abstract by December 16 and to seeing you in January. Stay tuned for a more detailed agenda and other information on the 1997 Restoration Workshop. Thank you.

encl: (1)

cc: Trustee Council Members
Restoration Liaisons and Work Force

GUIDELINES FOR ABSTRACTS DUE DECEMBER 16

Abstracts are needed from the project leader or principal investigator for each project that received EVOS Trustee Council funding in FY 1996. Please submit no later than Monday, **December 16, 1996,** to Stan Senner, Science Coordinator, at the Restoration Office, 645 G Street, Suite 400, Anchorage, AK 99501. Please submit your abstract on a diskette (w/hard copy) or by e-mail (<stans@oilspill.state.ak.us>), preferably in a WordPerfect 6.0/6.1 (or ASCII) format.

Abstracts should be a **maximum of one type-written, single-spaced page,** and should include:

(1) project number and title;

(2) principal investigators, including names, mailing addresses (for each PI, if different), and telephone number for the lead investigator;

(3) purpose and objectives of the restoration study or project, including reference to injured resources (include scientific names for plants and animals);

(4) study area;

(5) brief mention of primary methods, materials, equipment (especially if not standard);

(6) description of major results in 1996, with reference to earlier results as needed; and

(7) summary comments that interpret or evaluate the results, especially in view of the status of the injured resource, restoration objectives, management applications, or future program directions.

These last two items are the most important, and should account for most of the substance of the abstract. Your abstract should not include detailed descriptions of experiments, organisms, and standard methods, nor references to the literature. In most cases tables and graphs will not be appropriate, but can be included if the abstract does not exceed one page.

Please write in plain English--i.e., use a minimum of jargon. These abstracts need to be understandable to readers of various backgrounds and levels of education.

A sample abstract is on the back of these guidelines. If you have questions, please call Stan Senner at 907-278-8012 or contact him by e-mail.

Project Number and Title: 96163E - APEX Project Component E - Reproduction and foraging of black-legged kittiwakes.

Principal Investigators: David Irons and Robert Suryan, U.S. Fish and Wildlife Service, 1011 E. Tudor Rd., Anchorage, Alaska 99503 (Phone 907/786-3376)

Abstract: The objective of this component was to determine relative food availability to kittiwakes at determined by foraging and reproductive parameters. Two sites in Prince William Sound (PWS) and one at the Barren Islands were compared. In 1995 we radio-tagged 60 kittiwakes and followed them during foraging trips with a boat. From this we located foraging areas that were used by birds breeding at specific colonies and exact locations where feeding took place. Birds from the Shoup Bay colony had a mean foraging trip duration of four hours and traveled more than 40km from the colony. Birds from Eleanor Island had a mean foraging trip duration of only two hours and traveled only 5km from the colony. Most foraging occurred within one kilometer of shore.

Birds at Shoup Bay ate mostly sandlance and herring, while birds at Eleanor Island and Seal Isalnd ate more herring and less sandlance. Birds at the Barren Islands ate mostly sandlance and capelin. These data support the prediction that birds at close colonies have more overlap in their diets than birds at distant colonies.

By combining the foraging data and the bird productivity data we see evidence that birds have flexible foraging behavior that can buffer their chicks against periods of food shortage. Birds from Shoup Bay had much longer foraging trips than birds at Eleanor, but chick growth rates were very similar at the two colonies. However, Irons has data from 1989 and 1990 that suggest a threshold beyond which the adults cannot buffer there chicks. These data suggest the relationship between forage fish abundance and seabird productivity is not linear, but is buffered by the adults.

We have historical data for Shoup Bay and all colonies in PWS which help put 1995 in perspective. Kittiwake productivity declined in PWS in 1990 and has remained low through 1995. By looking at reproductive parameters for all these years we concluded that kittiwake productivity in PWS has declined because of a decrease in available food and a increase in predation. Knowing that herring and sandlance are important prey species for kittiwakes, we suggest five possible reasons why food has declined in PWS since 1990: (1) the oil spill (2) disease in herring (3) competition with pink salmon smolt (4) an ecosystem shift in PWS that favors walleye pollack (5) a large-scale climatic shift in the Gulf of Alaska. We suggest that predation may have increased because the prey (pink salmon and herring) of a major predator, bald eagles, has decreased since the spill and bald eagles switched to preying more on kittiwake young.

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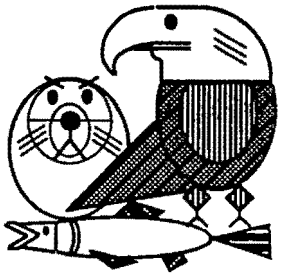

November 5, 1996

John Alden, Adjunct Research Professor
UAF - Department of Plant, Animal and Soil Sciences
School of Agriculture and Land Resources Management
P.O. Box 757200
Fairbanks, Alaska 99775-7200

Dear John,

Thanks for providing the information on your work at Two Moon Bay. As you are aware, the habitat protection acquisition involving the Tatitlek lands at Two Moon Bay, are part of a larger "package" that is subject to approval by the Tatitlek Corporation shareholders. If the acquisition is approved, ownership of the area you are interested in will be transferred to the U.S. Forest Service. (While the Trustee Council oversees use of the settlement funds, actual title to land acquired is held by individual federal or state agencies.) Under the proposal currently pending, the USFS will have responsibility for the lands you are interested in at Two Moon Bay. You should continue to keep in touch with Dave Gibbons regarding any questions you may have regarding your study sites.

With respect to maintenance of the studies, I would also direct you to Mr. Gibbons as information that would be derived from continued investigation will likely be of greatest interest to the land manager (i.e., USFS). I will also add your name to our mailing list for future distribution of the Trustee Council's annual solicitation for project proposals. The invitation, published in mid-February, describes restoration projects that the Council has been supporting and offers an opportunity for new proposals. The Council operates on a federal fiscal year (October 1 - September 30).

For your reference, I have enclosed a copy of our most recent annual report.

Sincerely,

Eric F. Myers
Director of Operations

Exxon Valdez Oil Spill Trustee Council

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MEMORANDUM

TO: Claudia Slater/ADF&G

FROM: Molly McCammon
Executive Director

RE: Authorization: Project 97263/Assessment, Protection, and Enhancement of Wildstock Salmon Streams in Lower Cook Inlet

DATE: November 5, 1996

The purpose of this memorandum is to formally authorize work to proceed on Project 97263/Assessment, Protection, and Enhancement of Wildstock Salmon Streams in Lower Cook Inlet. The work must be performed consistent with the revised Detailed Project Description dated July 5, 1996.

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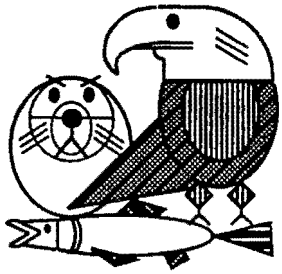

MEMORANDUM

To: Selected Principal Investigators (see attachment)

From: Stan Senner, Science Coordinator

Subject: Presentations at the 1997 Restoration Workshop

Date: November 5, 1996

The 1997 Restoration Workshop is scheduled for January 23-25, 1997 at the Hotel Captain Cook in Anchorage. The workshop will run all day Saturday, including an afternoon session geared toward the general public. The theme of the 1997 workshop is "ecosystem research, modeling, and management." A general call for abstracts and posters will be mailed later this week.

In addition to talks on aspects of the three ecosystem projects (SEA, NVP, and APEX), there will be presentations on about a dozen individual projects, emphasizing projects not heard from at the 1996 workshop, new work, or on-going work for which there are new and exciting results. **Accordingly, the purpose of this memorandum is to invite you to give one of the oral presentations on FY 1996 project results. See the attached list for details.**

Each presentation should be 15 minutes, plus 5 minutes for questions ($\sum = 20$ min). Slides are preferred, but an overhead projector also will be available. I do not yet have a specific time slot for your talk, but most likely it will be on Friday (24th) afternoon or Saturday (25th) morning.

My hope is that each of you has made plans to be at the workshop and will be available to give this presentation. **Please confirm your participation, or let me know if there is a problem, by e-mail (<stans@oilspill.state.ak.us>) or telephone. If someone other than you will give the talk, please also let me know so that I can get the right person on the printed program.** Once the program is set, I will get back to you with more details. Thank you.

encl: list of projects and project leaders/PIs

cc: Molly McCammon, Executive Director
Agency Liaisons and Work Force

1997 Restoration Workshop
January 23-25, 1997
Proposed Presentations on Individual Projects (FY 96 Results)

Project Number & Title		Investigator/Leader	Comment
96139A2	Port Dick spawning channel	Dudiak & Dickson	
96162	herring disease	Kocan et a.	
96074	herring reproductive impairment	Carls	summary report
96145	cutthroat trout--life history forms	Reeves	1st-year results
95012	killer whale monitoring	Matkin	status? genetics? contaminants?
95064	harbor seal monitoring...	Frost	fatty acids
96161	harlequin duck genetics	Goatcher et al.	1st-year results
96142	Kittlitz's murrelet--status & ecol.	Day	1st-year results
96159	marine bird boat surveys	Agler	long-term summary
96131	Chugach region clam restoration	Brown & Daisy	
96210	PWS youth area watch	Henning	link to Harris & the pristane project
96149	archaeological site stewardship	Reger	

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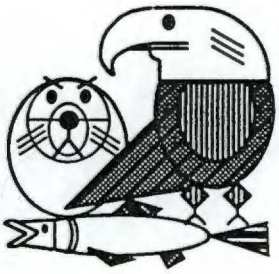

FAX COVER SHEET

To: See distribution Number:

From: Stan Senner Date: November 5, 1996

Comments: Total Pages: 3

Dudiak & Dickson	907-235-2448
Kocan et. al.	206-1685-~~3275~~ 3275
M. Carls	907-789-6094
G. Reeves	541-750-7329
C. Matkin	907-235-6590
K. Frost	907-452-6410
B. Goatcher	907-486-3331
R. Day	907-455-6781
B Agler	786-3350
Brown & Daisy	907-424-5906
D. Reger	269-8908
M. Henning	561-8659

Document Sent By: Keri Dile

3/27/96

1997 Restoration Workshop
January 23-25, 1997
Proposed Presentations on Individual Projects (FY 96 Results)

Project Number & Title		Investigator/Leader	Comment
96139A2	Port Dick spawning channel	Dudiak & Dickson	
96162	herring disease	Kocan et a.	
96074	herring reproductive impairment	Carls	summary report
96145	cutthroat trout--life history forms	Reeves	1st-year results
95012	killer whale monitoring	Matkin	status? genetics? contaminants?
95064	harbor seal monitoring...	Frost	fatty acids
96161	harlequin duck genetics	Goatcher et al.	1st-year results
96142	Kittlitz's murrelet--status & ecol.	Day	1st-year results
96159	marine bird boat surveys	Agler	long-term summary
96131	Chugach region clam restoration	Brown & Daisy	
96210	PWS youth area watch	Henning	link to Harris & the pristane project
96149	archaeological site stewardship	Reger	

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*** MULTI TRANSACTION REPORT ***
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INCOMPLETE TX/RX 12066858275

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ERROR

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*** ACTIVITY REPORT ***
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TRANSMISSION OK

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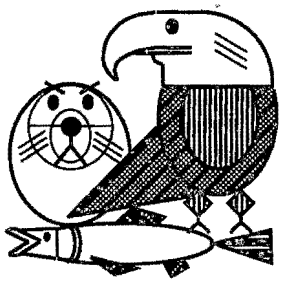
CONNECTION ID	
START TIME	11/05 14:41
USAGE TIME	01'43
PAGES	3
RESULT	OK

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



MEMORANDUM

TO: All Staff

FROM: Eric F. Myers

DATE: 11/4/96

SUBJ: State Policy for Use of Office Technology

Please read and sign the attached policy by November 6 (Wednesday) and return to Rebecca who will collect them for return to LaRae. Please also note that the forms should be witnessed.

Sorry for the short notice, but I only received the memo myself late Friday!

Thanks.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, AK 99802-5526
PHONE: (907) 465-6141
FAX: (907) 465-2332

MEMORANDUM

TO: Division Directors
Department of Fish and Game

FROM: Frank Rue
Commissioner
Department of Fish and Game

DATE: October 11, 1996

SUBJECT: New State Policy **For Immediate Distribution**

The attached state policy regarding use of office technology for Alaska's state employees became effective earlier this week. It is being sent to all state employees. This new policy statement, while not exhaustive, clearly states prohibited uses of office technology. These prohibited uses must be read and understood by all employees. There must be no misunderstanding of this policy of the employer options should violations occur.

Please distribute this policy to all full-time, part-time and seasonal employees in your division. Please insure that each of them reads the policy, has an opportunity to ask questions if they do not understand any part of it, and signs a copy of the policy indicating their understanding. All signed copies must be returned to the Personnel Section in the Division of Administration where they will be filed in individual personnel files. A copy of the policy will become part of the new employee packet of information to be used for all future hires, and should also be collected when seasonal employees return to duty next spring.

To facilitate distribution, this policy should be sent out electronically. Paper copies should be made available for individuals that do not have access to e-mail. Please return signed copies to Lynn Ate no later than October 25, 1996. If you have any questions about the policy itself, please call Kevin Brooks at 465-5999. If employees have questions about how to clear files from their computer, they should contact your division LAN administrator.

cc: Commissioner Mark Boyer
Lynn Ate, Human Resources Manager
Headquarters Administrative Managers

State Policy Regarding
Personal Use of State Office Technologies

It is in the best interest of the state to encourage Alaska's state employees to learn to use the new office technologies that are fundamental to their future success as state employees. Use of technology that meets ethical standards and provides exposure, education, or experience is allowable and encouraged under this policy.

The office environment has a wide variety of technologies such as: digital telephone services (voice mail, message broadcasting, message and call forwarding), fax servers, image scanning and copying (color, reduction, enlargement, binding, collating), shared and stand-alone computers (fixed, portable), pagers (text and voice), cellular phones, data networks (local, regional, global), dial-up network facilities, Global Positioning Systems (fixed, portable), VHF and CB radios (fixed, portable), and wireless dispatched office pick-up/delivery courier services.

Use of office technologies is no different from use of any other state-provided item in the work place. Executive Branch public employees of the State of Alaska must conform to applicable Alaska statutes, orders, and codes. Reasonable use and common sense must prevail in the work place use of office technologies.

Prohibited uses of office technologies (not necessarily limited to the following):

1. Use for any purposes which violate a United States or State of Alaska law or the Alaska Administrative Code.

2. Use for any commercial activities, including commercial advertising, unless specific to the charter, mission, or duties of the government agency.

3. Use for access to or distribution of indecent or obscene material or child pornography.

4. Harassing other users, computing systems, and/or damaging or altering the software components of same.

5. Use for fundraising, union activities, political campaign activities, or public relations activities not specifically related to state government activities.

6. Any activity which adversely affects the availability, confidentiality, or integrity of any office technology.

The Executive Branch Ethics Act states a public employee may not "use state time, property, equipment, or other facilities to benefit personal or financial interests" (AS 39.52.120(b)(3)). Further, "standards of ethical conduct for members of the executive branch need to distinguish between those minor and inconsequential conflicts . . . and those conflicts of interests that are substantial and material." (AS 39.52.110(a)(3))

Applicable Statutes, Administrative Orders, and Codes that you may refer to include, but are not limited to: AS 39.52, Alaska Executive Branch Ethics Act; Administrative Order #81, Nondiscrimination and Nonharassment; Administrative Code 9 AAC 52, Alaska Executive Branch Code of Ethics; AS 39.25.160, Alaska Little Hatch Act; AS 24.60, Legislature Standards of Conduct.

The State of Alaska reserves the right to routinely monitor Internet and E-mail use by individuals and report such use to appropriate supervisors. Contents of state employees' computers are also subject to "Public Records" requests.

This policy is to be read and signed by all employees in the presence of their supervisor, agency human resources staff, or divisional administrative staff and filed in each employee's personnel file. The signature of the employee constitutes acknowledgment of their obligation to abide by the policy. Use of the Internet and other office technology is a revocable privilege. User accounts and password access may be withdrawn if a user violates this policy. Violations may also result in possible personnel action up to and including termination, and depending on the severity, may result in criminal prosecution and/or civil liability. After reading and signing this policy, state employees have 48 hours after the date signed to clear any material that does not conform with this policy from any office technology.

Signature of Employee	Signature of Witness
Printed Name of Employee	Printed Name of Witness
Department	Department
PCN Date	PCN Date

cc: Personnel File

The following is the text of an E-mail from Kevin Brooks sent state-wide on Tuesday, October 29, 1996, at 10:20AM:

TECHNOLOGY POLICY QUESTIONS

There have been numerous questions regarding the State's new office technology policy. I apologize for the delay in responding, but I have been trying to gather answers and send out a single response to everyone. The responses are not listed in any particular order.

First, I'd like to thank the hundreds of employees who have signed and returned the policy to date. Because of the questions raised, I am extending the deadline for submitting the remaining signed policies until Wednesday, November 6.

1) The most commonly asked question is whether occasional personal use of office technologies (i.e. the Internet, Email, telephone, copier, etc.) is allowable. The answer is yes, but on your own time. This includes Email to friends, family, birthday greetings, retirement announcements, etc., both locally and out-of-state. It includes local telephone calls. It also includes Internet access to check the weather, sports, stock exchange or other items of personal interest that do not violate other parts of the policy (i.e. pornography, commercial interests, etc.). Tracking PERS, SBS and deferred compensation investments are also considered allowable activities.

Employees should still use discretion with "allowable" activities. For example, an employee at a front desk with a scheduled lunch hour from 1:00-2:00 PM should be sensitive to public perception of using state resources during "normal work hours". A five minute personal telephone call at a front desk or switchboard may never be appropriate because it limits availability to the public or other employees, but a call of even longer duration could be permissible in a private office with the concurrence of the supervisor.

State equipment, time and resources should not be used for football or baseball (or other sports) pools, raffles, selling gift wrap, girl scout cookies or other types of organized fund raising or commercial activities.

2) Can I download an audio player or point-cast network from the Internet?
Audio players have been used to listen to National Public Radio and "point-cast" provides a continuous ticker-tape on your computer screen of stock listings, current news, scores, etc., much like you see on television on CNN. Both of these are band-width intensive and should not be downloaded.

3) Why does the form need to be signed and why do I need a witness?
The witness requirement has posed a hardship in some remote offices. Where a supervisor or administrative staff person is not available on site, any other employee can be a witness on the form. A signature and a witness are required because in an extreme case where abuse is suspected, it is important for due process considerations that an employee receive "active" notification of the policy. The signature requirement is similar to the drugs in the workplace policy and sexual

harassment policy which also require signatures. None of us objects to getting a witness for our PFD applications, so this requirement should not cause concern. It does not call into question our ability to perform the other vital and important aspects of our jobs.

4) How secure are my documents and other potentially sensitive information on my computer or network?
Email (with or without attachments) that is sent internally in the department is generally secure. If you send documents or messages outside the department, they become "unencrypted" and are vulnerable to unauthorized access. With regard to the state's data center, the building is secured with video surveillance, and access to secure areas is controlled with card keys. Employees are fingerprinted and must carry ID cards, and the Division of Information Services is subject to an annual security audit.

5) What about situations where other people have access to my computer, both authorized and unauthorized?
There is no substitute for good security practices. Passwords should not be made public and should be changed on a regular basis. An entire office should not have the same password. Password modification is a very simple procedure. Please check with your computer resource person for details. If you will be on leave and need to share a password, change it at the first opportunity upon your return. These types of security measures do not violate availability concerns as described under #6 of the policy.

A LAN administrator is not responsible for actions of other employees over which s/he has no control, or the content of material on their computers. It is important, however, for LAN administrators to monitor network usage to the extent that it is part of their normal duties and identify potential problems to their supervisor.

Computer caches often document activity internally with "date and time stamps." This information can be verified against timesheets and leave slips to provide protection to an employee whose computer has been used by someone else. If an individual will be away from their workstation during the day for an extended period of time, you may wish to just sign-off, instead of leaving your machine on and vulnerable to this type of use/abuse.

6) What constitutes indecent, obscene, pornography?
These are obviously subjective terms. Clearly, any type of pornography is inappropriate for state work sites, whether on the computer or in written or other format (such as posters, calendars, telephone calls, etc.).

Webster's defines indecent as "not proper and fitting, unseemly, improper; morally offensive, obscene." It defines obscene as "offensive to one's feelings, or to prevailing notions of modesty or decency; lewd; disgusting; repulsive." It defines pornography as "writings, pictures, etc. intended primarily to arouse sexual desires." In a department policy memo dated May 21, 1991 on discriminatory harassment, then Commissioner Carl Rosier stated that "A general guideline to follow in determining whether or not harassment has occurred is that if a person clearly states that they feel a poster, remark, joke, touch, look, etc. is offensive, then it is offensive." This same rationale should be used in defining indecent, obscene and pornography.

7) The term "office technologies" is poorly defined.
Actually the term is well defined and lists numerous examples. While the list is not intended to be all-inclusive, is does give a representative sample to which one can interpolate other technology types.

8) What is meant by altering software components?
This item was listed in #5 of the policy and primarily addresses the intentional corruption of data. It does not apply to upgrading software, formatting disk space to achieve optimal performance, deleting unneeded programs, performing file server back-ups, running anti-virus scans, etc. It also does not apply to accidents that may occur resulting in hardware or software damage. A key factor in any of these cases would be intent. In the event of damage occurring to state property, it would be necessary to ascertain whether scheduled maintenance, an accident or sabotage had occurred. The same criteria could potentially be applied to any work situation, such as a weir failure, and would require some amount of investigation by a supervisor.

9) The policy is not enforceable.
Many state policies are not entirely enforceable, although that does not preclude employees from making a good faith effort at compliance, or supervisors from attempting to enforce them. With regard to this policy, there may be individuals who will alter passwords, eavesdrop on telephone conversations, intercept mail, or circumvent the policy in any number of other ways, although I believe a majority of our employees do not fall into that category.

It is the intention of ADFG management to apply this policy in a reasonable fashion that would include due process to any individual suspected of violating it. It is also expected that employees will make a reasonable effort to comply with the terms of the policy and that supervisors will make a reasonable effort to enforce it, just as we do all other policies and procedures that have been developed by and for the department.

10) How do I know what has been put on my computer, either by myself or someone else?
This may in fact require a physical review of the contents of your hard drive or network drive. The File Manager option available on most PC's will allow for a review of files. If you are uncertain about how to access your files, you should contact your network administrator. If you have personal files, you should delete them or back them up to personally purchased floppy disks.

11) What constitutes "adversely affecting availability"?
This has been touched on in several other responses. To summarize, appropriate use of password security does not constitute a violation. Running routine processes (back-ups, virus checks, etc.) does not constitute a violation. Working on a state-owned PC at home (with supervisor approval) does not constitute a violation. Routine, local telephone calls of limited duration normally do not constitute a violation, but discretion should be used as described in the example above.

Personal use of a "shared" computer on your lunch hour when another employee has a legitimate work-related use is a violation. Using a state copier to make copies of a football pool sheet is a violation. Downloading an audio player or a point-cast is a violation.

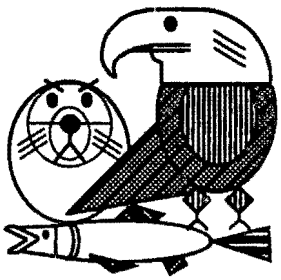
12) Can I load personally owned software on my computer?
This depends. For example, Quicken software for your personal finances may be allowable, but it is definitely not allowable if you maintain your accounting records for a private business. The presence of personal software on a state PC could affect the operation of other state-owned software by over-riding print drivers, taxing memory, etc. It could also potentially violate software licensing agreements if it is installed on more than one workstation. You should check with your network administrator on this question.

That is the extent of questions I have received to date. I have attempted to provide specific examples and lists to make the responses more meaningful to the requester. None of the lists or examples should be considered all-inclusive, however they should provide a representative sample that one can apply to an individual situation. Please assist me in providing a hard-copy of this Email to individuals who do not receive it electronically.

I look forward to receiving the remaining signed policies by Wednesday, November 6th.

Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178



Restoration Office Tentative Meeting Schedule

November 1996

7 Legislative Budget & Audit - Spruce Bark Beetle Infestation & Alaska SeaLife Center Fish Pass
8 Trustee Council meeting Re: Public Advisory Group Nomination & other issues
12 Killer Whale Review
13-16 Forage Fish Symposium - Coordinated by Alaska Sea Grant - Anchorage Hilton Hotel
20 Restoration Work Force meeting Re: Deferred Projects (followed by a Restoration Office Potluck Lunch)

December 1996

6 Trustee Council meeting Re: Deferred FY97 Projects & other issues

January 1996

23-25 Annual Restoration Workshop
27 SEA Modeling Review
28-29 Ecological Modeling Workshop
30-31 NVP Review

February 1997

19 SEA Herring Review
20-21 APEX Review

For more information on any of the above meetings, please contact the Anchorage Restoration Office.

*** Tentative Dates**

Update: 11/7/96 rwf

raw

Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 G Street, Suite 401, Anchorage, Alaska 99501-3451
Phone: (907) 278-8012 Fax: (907) 276-7178

FAX COVER SHEET

To: Restoration Work Force

From: Keri Hile Date: November 7, 1996

Comments: Total Pages: 2

Restoration Office Tentative
Meeting Schedule Updated 11/7/96

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
Claudia Slater/Bill Hauser
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron Dianne Munson
Piper, Ernie
Rice, Bud
Spies, Bob
Thompson, Ray
Wright, Bruce
Sullivan, Joe

HARD COPY TO FOLLOW NO FAX SENT BY: Keri Hile

8/7/96

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*** MULTI TRANSACTION REPORT ***
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INCOMPLETE TX/RX

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	[16] 2672450	RITA MIRAGLIA
	[17] 2713992	R.THOMPSON
	[18] 2672474	SULLIVAN-SLATER
	[19] 7863636	L.BARTELS
	[20] 7863350	C.BERG
	[21] 2572517	B.RICE
	[24] 2697652	E.PIPER
	[35] 15103737834	B.SPIES
	[38] 2715827	G.BELT

ERROR