13.08.01 Feb 97 (2 of 2)

# *Exxon Valdez* Oil Spill Trustee Council

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


## MEMORANDUM

TO: Trustee Council Members

FROM: Sandra Schubert
Project Coordinator

THROUGH: Molly McCammon
Executive Director

DATE: February 12, 1997

RE: Quarterly Project Status Summary -- December 31, 1996

Attached is the *Exxon Valdez* Oil Spill Project Status Summary for the quarter ending December 31, 1996, for all projects funded by the Trustee Council during 1992, 1993, 1994, 1995, 1996, and 1997. The Summary focuses on the status of annual and final reports, and includes progress updates for FY 97 projects.

As of December 31, 1996, a total of 138 project reports had been peer reviewed and accepted by the Chief Scientist. Once accepted by the Chief Scientist, reports are submitted to the Oil Spill Public Information Center (OSPIC). As of December 31, 1996, 125 reports were available to the public through OSPIC and other libraries around the state. (See **Attachment C** for a list of libraries, and a list of reports available).

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

### Status of 1992 Project Reports as of December 31, 1996

A total of 60 projects were funded in the 1992 Work Plan. With very few exceptions, a final report -- that is, a report that is subject to peer review and approval by the Chief Scientist -- is required on each 1992 project. Some projects require more than one report. (NOTE: Reports

"in progress" are in peer review, are under revision by the PI in response to peer reviewer comments, or have been revised and are undergoing a second review by the Chief Scientist.)

| Reports Available to Public at OSPIC | Reports Accepted by Chief Scientist | Reports in Progress | No Report Yet Submitted |
|---|---|---|---|
| 59 | 64 | 18* | 1 |

* NOTE: This figure includes 9 more reports than it did in previous quarters. The report for Project FS11 will consist of 10 articles being prepared for the Canadian Journal of Fisheries and Aquatic Science. Each of these articles is now being tracked as a separate report.

**Status of 1993 Project Reports as of December 31, 1996**

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

| Reports Available to Public at OSPIC | Reports Accepted by Chief Scientist | Reports in Progress | No Report Yet Submitted |
|---|---|---|---|
| 19 | 21 | 5 | 2 |

**Status of 1994 Project Reports as of December 31, 1996**

A total of 42 projects were funded in the 1994 Work Plan. With some exceptions, a report that is subject to peer review by the Chief Scientist is required on each 1994 project. Some projects require more than one report.

| Reports Available to Public at OSPIC | Reports Accepted by Chief Scientist | Reports in Progress | No Report Yet Submitted |
|---|---|---|---|
| 28 | 31 | 6 | 0 |

**Status of 1995 Project Reports as of December 31, 1996**

A total of 66 projects were funded in the FY 95 Work Plan. With some exceptions, a report that is subject to peer review by the Chief Scientist is required on each 1995 project. Some projects require more than one report.

| Reports Available to Public at OSPIC | Reports Accepted by Chief Scientist | Reports in Progress | No Report Yet Submitted |
|---|---|---|---|
| 19 | 22 | 24 | 4 |

**Status of 1996 Projects as of December 31, 1996**

Annual reports (for continuing projects) or final reports (for completed projects) are due April 15, 1997 for all projects funded in the FY 96 Work Plan, unless an extended due date is agreed to by the Restoration Office. While I expect most reports to arrive on schedule (two have already been received), some extensions will likely be granted, particularly for final reports that are analyzing data from multiple years (e.g., Project \258, Sockeye Salmon Overescapement). As it did last year, the *Invitation to Submit Restoration Proposals for FY 98* makes clear that FY 98 projects will not be authorized for any PI who has an overdue report.

**Status of 1997 Projects as of December 31, 1996**

October-to-December 1996 was the start-up quarter for most projects funded in the FY 97 Work Plan. A few projects have had a delayed start, due primarily to the time associated with execution of contracts. Examples are Project 97263/Port Graham Stream Assessment, for which contract negotiations between ADF&G, Port Graham Corporation, and the Kenai Economic Development District are still underway; and Project 97223/Publication of Sea Otter Data, for which contract negotiations between NOAA and Enhydra Research were delayed until December. The tentative schedule for the FY 98 work plan calls for Trustee Council action in early August, rather than at the end of August as it was this year. This will allow additional time for contract preparation prior to the beginning of the federal fiscal year, which I hope will reduce or eliminate contract-related delays in project start-up.

Project activity of interest this quarter includes: a TEK Advisory Group was established and two TEK specialists were hired (Project 97052B), an aerial survey of sea otters was conducted in Prince William Sound (Project 97025), thermal marks were applied to FY 96 pink salmon embryos at four hatcheries (Project 97188), nominations were solicited for a second round of projects designed to restore habitat along the Kenai River (Project 97180), and a contractor was selected to design the EVOS stations called for in the Sound Waste Management Plan (Project 97115).

In addition, at least one manuscript was accepted for publication (Project 96074): Iverson, S.J., K.J. Frost, and L.F. Lowry. Fatty acid signatures reveal fine scale structure of foraging

distribution of harbor seals and their prey in Prince William Sound, Alaska. Marine Ecology Progress Series. Twenty-five students were selected for participation in the Youth Area Watch project, Project 97210 (four from Tatitlek, three from Chenega Bay, four from Cordova, five from Valdez, two from Whittier, six from Seward, and one from Hinchinbrook Island). Some of the students participated in a physical oceanography cruise in December (Project 97320M). Others received AWL (age, weight, length) protocol training during the November/December juvenile herring cruises (Project 97320T).

Conclusion

In brief, progress continues to be made toward completion and public availability of project reports. In total, 199 reports will be produced for projects funded in 1992, 1993, 1994, and 1995. As of December 31, 138 of these reports had been peer reviewed and accepted by the Chief Scientist and only 7 had not yet been submitted for peer review. Perhaps more importantly, 125 reports on studies funded by the Trustee Council are now available to the public through OSPIC.

## ATTACHMENT A

Summary of Project Report Status as of December 31, 1996

**1992 WORK PLAN**

| AGENCY | NUMBER OF REPORTS | Not Yet Submitted to Chief Sci. | In Progress | Peer Rev'd/ Accepted by Chief Scientist | Available to Public at OSPIC |
|---|---|---|---|---|---|
| ADEC | 2 | 0 | 0 | 2 | 2 |
| ADFG | 26 | 1 | 13 | 21 | 21 |
| ADNR | 1 | 0 | 0 | 1 | 1 |
| DOI | 33 | 0 | 5 | 28 | 25 |
| NOAA | 11 | 0 | 0 | 10 | 10 |
| USFS | 2 | 0 | 0 | 2 | 0 |
| **TOTAL** | **84** | **1** | **18** | **64** | **59** |

**1993 WORK PLAN**

| AGENCY | NUMBER OF REPORTS | Not Yet Submitted to Chief Sci. | In Progress | Peer Rev'd/ Accepted by Chief Scientist | Available to Public at OSPIC |
|---|---|---|---|---|---|
| ADEC | 2 | 0 | 1 | 1 | 1 |
| ADFG | 12 | 1 | 3 | 8 | 8 |
| ADNR | 0 | 0 | 0 | 0 | 0 |
| DOI | 9 | 1 | 1 | 7 | 6 |
| NOAA | 3 | 0 | 0 | 3 | 3 |
| USFS | 2 | 0 | 0 | 2 | 1 |
| **TOTAL** | **28** | **2** | **5** | **21** | **19** |

**1994 WORK PLAN**

| AGENCY | NUMBER OF REPORTS | Not Yet Submitted to Chief Sci. | In Progress | Peer Rev'd/ Accepted by Chief Scientist | Available to Public at OSPIC |
|---|---|---|---|---|---|
| ADEC | 1 | 0 | 0 | 1 | 0 |
| ADFG | 19 | 0 | 3 | 16 | 16 |
| ADNR | 2 | 0 | 0 | 2 | 2 |
| DOI | 6 | 0 | 2 | 4 | 3 |
| NOAA | 5 | 0 | 0 | 5 | 5 |
| USFS | 4 | 0 | 1 | 3 | 2 |
| **TOTAL** | **37** | **0** | **6** | **31** | **28** |

## ATTACHMENT A

Summary of Project Report Status as of December 31, 1996

**1995 WORK PLAN**

| AGENCY | NUMBER OF REPORTS | Not Yet Submitted to Chief Sci. | In Progress | Peer Rev'd/ Accepted by Chief Scientist | Available to Public at OSPIC |
|---|---|---|---|---|---|
| ADEC | 4 | 1 | 1 | 2 | 1 |
| ADFG | 25 | 0 | 14 | 10 | 10 |
| ADNR | 1 | 0 | 0 | 1 | 1 |
| DOI | 6 | 1 | 3 | 3 | 2 |
| NOAA | 8 | 2 | 4 | 2 | 3 |
| USFS | 6 | 0 | 2 | 4 | 2 |
| **TOTAL** | **50** | **4** | **24** | **22** | **19** |

# ATTACHMENT B
## Reports Significantly Behind Schedule

| Agency | Project Number | PI | Final or Annual | Project Title | Status of Report |
|---|---|---|---|---|---|
| DOI | MM6 | Ballachey | Final | Sea otter | Due date extended to 1/31/97 (reports #2, 3, 16) |
| DOI | 93006 | Birkedahl | Final | Site specific archaeology | Never submitted |
| DOI | 94266-1 | Irvine | Final | Fate/persistence of oil | Peer reviewed and returned to PI for revision 4/8/95; due date for revision extended to 10/30/96; not received |
| DOI | 95029 | Schempf | Final | Bald eagles | Peer reviewed; returned to PI for revision 4/8/96 |
| DOI | 95038 | PSG | Final | Pacific Seabird Group -- conference | Draft under review by contributors; expected to submit to Chief Scientist 11/96; not received |
| ADFG | B11 | Rothe | Final | Harlequin duck damage assessment | Peer reviewed; returned to PI for revision 2/13/96 |
| ADFG | FS01 | Fried, Bue | Final | Spawning area injury | Never submitted; was expected 10/1/96; not received |
| ADFG | 93033-1 | Rothe | Final | Harlequin duck - Afognak habitat assessment/PWS production | Peer reviewed; returned to PI for revision 11/14/95 |
| ADFG | 93033-2 | Rothe | Final | Harlequin duck restoration | Never submitted; waiting for contractor's (Fry) analysis |
| ADFG | 94279 | Miraglia | Final | Food safety testing | Peer reviewed; returned to PI for revision 6/12/96 |
| ADFG | 95166 | Willette | Annual | Herring natal habitats | Peer reviewed; returned to PI for revision 6/10/96 |
| DEC | 93038 | Was Piper; now who? | Final | Shoreline assessment | Peer reviewed; returned to PI for revision 1/26/96; was expected 11/96; not received |
| NOAA | 95090 | Babcock | Final | Mussel bed monitoring | Never submitted; was due 9/30/96; then expected 11/10/96; not received |

# ATTACHMENT B
## Reports Significantly Behind Schedule

| | | | | | |
|---|---|---|---|---|---|
| NOAA | 95121 | Worthy | Annual | Fatty acid signatures of forage fish | Report submitted was incomplete so returned to PI (2/97); now waiting for submittal of complete draft |
| USFS | 95007B | Yarborough | Final | Archaeological site restoration | Status unclear; only partial draft was submitted for peer review. Need to identify date for completion of draft |

ATTACHMENT C

**OIL SPILL PUBLIC INFORMATION CENTER**
**645 G Street**
**Anchorage, AK 99501**
**(907) 278-8008**
**(907) 265-9359 fax**
**1-800-478-7745 Alaska**
**1-800-283-7745 outside Alaska**

**Final Reports**
**January 1997**

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

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

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

Anchorage Copy Centers:

Clay's Printing - (907) 561-6270
TimeFrame - (907) 562-3822

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

FINAL REPORTS

**January 1997**

**Natural Resource Damage Assessment Studies**

* = new additions to this list.

Air/Water 3

Short, J.W. and P.M. Harris. 1996. Petroleum hydrocarbons in near-surface seawater of Prince William Sound, Alaska, following the *Exxon Valdez* oil spill I: Chemical sampling and analysis, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Air/Water Study Number 3), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay, Alaska. (NTIS No. PB96-196951)

Air/Water 3 (Subtidal 3A)

Short, J.W. and P. Rounds. 1995. Petroleum hydrocarbons in near-surface seawater of Prince William Sound, Alaska, following the *Exxon Valdez* oil spill II: analysis of caged mussels, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Air/Water Study Number 3, Subtidal Study Number 3A), National Oceanic and Atmospheric Administration, Juneau, Alaska. (NTIS No. PB96-196969)

Archaeology 1

Reger, D.R., J.D. McMahan, and C.E. Holmes. 1992. Effect of crude oil contamination on some archaeological sites in the Gulf of Alaska, 1991 investigations, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Archaeology Study Number 1), Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, Office of History and Archaeology, Anchorage, Alaska. (NTIS No. PB96-194659)

Bird 2

Klosiewski,S.P. and K.K.Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 2), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB97-112684)

Bird 3

Nyswander, D.R., C.H. Dippel, G.V. Byrd, and E.P. Knudtson. 1993. Effects of the *Exxon Valdez* oil spill on murres: a perspective from observations at breeding colonies, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 3), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB97-112700)

Bird 4

Bowman, T.D., P.F. Schempf, and J.A. Bernatowicz. 1993. Effects of the *Exxon Valdez* oil spill on bald eagles, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 4), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-204250)

Bird 6

Kuletz, K.J. 1994. Marbled murrelet abundance and breeding activity at Naked Island, Prince William Sound,

and Kachemak Bay, Alaska, before and after the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 6), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB97-112692)

Bird 7

Nishimoto, G. and G.V. Byrd. 1993. Effects of the *Exxon Valdez* oil spill on fork-tailed storm petrels breeding in the Barren Islands, Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 7), U.S. Fish and Wildlife Service, Homer, Alaska. (NTIS No. PB97-112676)

Bird 9

Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the *Exxon Valdez* oil spill. *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 9), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-204276)

Bird 12/Restoration Study 17

Andres, B.A. 1995. The effects of the *Exxon Valdez* oil spill on black oystercatchers breeding in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Bird Study Number 12, Restoration Study Number 17), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-204292)

Coastal Habitat 1B

Babcock, M.B. and J.W. Short. 1996. Prespill and postspill concentrations of hydrocarbons in sediments and mussels in intertidal sites within Prince William sound and the Guld of Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Coastal Habitat Study Number 1B), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska. (NTIS No. PB96-194824)

Fish/Shellfish 2

Sharr, S., B.G. Bue, S.D. Moffitt, A. Craig, and D.G. Evans. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 2), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska. (NTIS No. PB96-194840)

Fish/Shellfish 3

Sharr, S., C.J. Peckham, D.G. Sharp, L. Peltz, J.L. Smith, M.T. Willette, D.G. Evans, and B.G. Bue. 1996. Coded wire tag studies on Prince William Sound salmon, 1989-1991, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 3), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Anchorage, Alaska. (NTIS No. PB96-196936)

Fish/Shellfish 4

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

Alaska.

Fish/Shellfish 4A

Willette, T.M., G. Carpenter, P. Shields, and S.R. Carlson. 1994. Early marine salmon injury assessment in Prince William Sound, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 4A), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska. (NTIS No. PB96-194758)

Fish/Shellfish 5 (Restoration 90)

Hepler, K.R., P.A. Hansen and D.R. Bernard. 1994. Impact of oil spilled from the *Exxon Valdez* on survival and growth of Dolly Varden and cutthroat trout in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 5; Restoration Study Number 90), Alaska Department of Fish and Game, Division of Sport Fish, Anchorage, Alaska.

Fish/Shellfish 7B and 8B

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

Fish/Shellfish 18

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

Fish/Shellfish 22

Freese, J.L. and C.E. O'Clair. 1995. Injury to crabs outside Prince William Sound, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 22), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska. (NTIS No. PB96-194782)

Fish/Shellfish 27

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

Fish/Shellfish 28

Geiger, H.J., W.D. Templin, J.S. Collie, and T.J. Quinn II. 1995. Run reconstruction and life history model, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Fish/Shellfish Study Number 28), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Juneau, Alaska. (NTIS No. PB96-208418)

Fish/Shellfish 30

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

Marine Mammal 1

Dahlheim, M.E. and O. von Ziegesar. 1993. Effects of the *Exxon Valdez* oil spill on the abundance and distribution of humpback whales (Megaptera novaeangliae) in Prince William Sound, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 1), U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, Washington. (NTIS No. PB96-194634)

Marine Mammal 2

Dahlheim, M.E. and C.O. Matkin. 1993. Assessment of injuries to killer whales in Prince William Sound, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 2), U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, Washington. (NTIS No. PB96-194642)

Marine Mammal 5 (Restoration Study 73)

Frost, K.J. and L.F. Lowry. 1994. Assessment of injury to harbor seals in Prince William Sound, Alaska, and adjacent areas following the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 5, Restoration Study Number 73), Alaska Department of Fish and Game, Wildlife Conservation Division, Fairbanks, Alaska. (NTIS No. PB96-197116)

Marine Mammal 6-1

Ballachey, Brenda. 1995. Biomarkers of damage to sea otters in Prince William Sound, Alaska following potential exposure to oil spilled from the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-1), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-4

Bodkin, J.K., D.M. Mulcahy, C.J. Lensink. 1996. Age-specific reproduction in female sea otters (Enhydra lutris) from Southcentral Alaska: analysis of reproductive tracts, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-4), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-5

Bodkin, J.L. and M.S. Udevitz. 1995. An intersection model for estimating sea otter mortality from the *Exxon Valdez* oil spill along the Kenai Peninsula, Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-5), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-194980)

Marine Mammal 6-7

DeGange, A.R., D.C. Douglas, D.H. Monson, and C.M. Robbins. 1995. Surveys of sea otters in the Gulf of Alaska in response to the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource

Damage Assessment Final Report (Marine Mammal Study Number 6-7), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-195003)

Marine Mammal 6-9

Doroff, A.M., and A.R. DeGange. 1995. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-9), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-194972)

Marine Mammal 6-10

Lipscomb, T.P., R.K. Harris, R.B. Moeler, J.M. Pletcher, R.J. Haebler, and B.E. Ballachey. 1996. Histopathologic lesions associated with crude oil exposure in sea otters, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-10), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-11

Lipscomb, T.P., R.K. Harris, A.H. Rebar, B.E. Ballachey, and R.J. Haebler. 1996. Pathological studies of sea otters, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-11), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-12

Monnett, C. and L.M. Rotterman. 1992. Movements of weanling and adult female sea otters in Prince William Sound, Alaska after the T/V *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-12), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-194899)

Marine Mammal 6-13

Monnett, C. and L.M. Rotterman. 1992. Mortality and reproduction of female sea otters in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-13), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-195964)

Marine Mammal 6-14

Monnett, C. and L.M. Rotterman. 1992. Mortality and reproduction of sea otters oiled and treated as a result of the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-14), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-196902)

Marine Mammal 6-15

Monson, D.H. and B. Ballachey. 1995. Age distributions of sea otters found dead in Prince William Sound, Alaska following the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-15), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-194675)

Marine Mammal 6-17

Rebar, A.H., B.E. Ballachey, D.K. Bruden, and K.A. Kloecker. 1996. Hematology and clinical chemistry of sea otters captured in Prince William Sound, Alaska following the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-17), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-18

Rotterman, L.M. and C. Monnett. 1991. Mortality of sea otter weanlings in eastern and western Prince William Sound, Alaska, during the winter of 1990-91, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-18), U.S Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB96-194998)

Marine Mammal 6-19

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

Restoration Study 11

Dragoo, D.E., G.V. Byrd, D.G. Roseneau, D.A. Dewhurst, J.A. Cooper, and J.H. McCarthy. 1995. Population levels and reproductive performance of murres based on observations at breeding colonies four years after the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report (Restoration Study Number 11), U.S Fish and Wildlife Service, Alaska Maritime National Wildlife Refuge, Homer, Alaska. (NTIS No. PB96-204268)

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Ferren, H. and J. Milton. 1995. Chenega chinook release program, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95272), Prince William Sound Aquaculture Corporation, Cordova, Alaska.

95320B

Riffe, R.R., S. Gehlbach, D.G. Evans, and B.G. Bue. 1996. Coded wire tag recoveries from pink salmon in Prince William Sound fisheries, 1995, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95320B), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska.

95320C

Joyce, T.L., D.G. Evans, and R. Riffe. 1996. Otolish marking of pink salmon in Prince William Sound hatcheries, 1995, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95320C), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Cordova, Alaska.

95320I

Schell, D.M. and A. Hirons. 1996. Isotope ratio studies of marine mammals in Prince William Sound, *Exxon*

*Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95320I), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

95320K

Ferren, H. and J. Milton. 1995. PWSAC-PWS system investigation: experimental fry release, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95320K), Prince William Sound Aquaculture Corporation, Cordova, Alaska.

*95427

Rosenberg, D.H., M.J. Petrula, and D.w. Crowley. 1996. Distribution, abundance, and composition of harlequin duck populations in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 95427), Alaska Department of Fish and Game, Division of Wildlife Conservation, Anchorage, Alaska.

96145

Reeves, G.H., K. Griswold, and K.P. Currens. 1996. Cutthroat trout and dolly varden in Prince William Sound, Alaska: the relation among and within populations of anadromous and resident forms, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 96145), U.S. Department of Agriculture, Pacific North West Research Laboratory, Corvallis, Oregon.

# *Exxon Valdez* Oil Spill Proje[illegible]atus Summary
## 1992 Work Pla[illegible]
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| AD | Administrative Director's Office | ALL | No report required. | | |
| ARC1 | Archaeological Survey | ADNR | Final report available to public at OSPIC. | Reger, D.R., J.D. McMahon, and C.E. Holmes. 1992. Effect of crude oil contamination on some archaeological sites in the Gulf of Alaska, 1991 investigations.<br>Four archaeological sites from which adequate collections and radiocarbon samples were obtained were sampled for sediments to test for presence of oil. Two sediment samples (Shuyak Island and Chenega Island) tested positive for oil. None of the sites yielded radiocarbon dates which appear to be significantly skewed from the expected age range. The results of the study show that reasonable dates can be obtained from the test sites despite presence of oil remains on the beach surface or in the case of two sites from within the cultural deposits. The results of the study are applicable to the sites studied and useful for management decisions based on broad general conclusions. | |
| AW1 | Surface Oil Maps | ADEC | Project terminated. DEC/NOAA overflight charts stored in Alaska Archives. | DEC/NOAA overflight charts stored in Alaska Archives. | |
| B02 | Boat Surveys | DOI | Final report available to public at OSPIC. | Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the *Exxon Valdez* oil spill. U.S. Fish and Wildlife Service, Anchorage.<br>Populations of 9 species or species groups (black oystercatcher, pigeon guillemot, cormorants, harlequin duck, loons, scoters, newgull, arctic tern, northwestern crow) declined more than expected in the oiled zone of Prince William Sound suggesting an oil effect. Most injured species were ecologically tied to intertidal or nearshore areas. | Continued as 93045 and 94159. |

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Printed: February 10, 1997

# *Exxon Valdez* Oil Spill Proje[illegible]atus Summary
## 1992 Work Pla[illegible]
## Quarter Ending December 31, 1996

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

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Printed: February 10, 1997

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| B07 | Storm Petrels Damage Assessment Closeout | DOI | Final report available to public at OSPIC. | Nishimoto, M. and G.U. Byrd. 1994. Effects of oil from the T/V *Exxon Valdez* spill on fork-tailed storm petrels breeding in the Barren Islands, Alaska. U.S. Fish and Wildlife Service. Homer.<br>At the largest storm-petrel colony within the spill trajectory (Barren Islands), no evidence of adverse effects to breeding petrels was found. Burrow occupancy rates were above average, nesting chronology was not delayed, and productivity was normal. | |
| B08 | Kittiwakes Damage Assessment Closeout | DOI | Draft report revised; resubmitted to Chief Scientist November 15, 1996. | Irons, D.B. 1994. Effects of the *Exxon Valdez* oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.<br>The number of breeding pairs did not decline at colonies in the oiled area of Prince William Sound but reproductive success in 1989 was less than expected, apparently due to low hatching success. Reproductive success did not recover by 1992 but whether the decline was due to the spill is unknown. | TS1 |
| B09 | Pigeon Guillemots Damage Assessment Closeout | DOI | Final report available to public at OSPIC. | Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the *Exxon Valdez* oil spill. U.S. Fish and Wildlife Service. Anchorage.<br>The population at a major breeding site within the spill trajectory (Naked Island) declined by 50% compared to 1972-1973 levels. A long-term decline within Prince William Sound predated the spill and, therefore, the decline at naked Island could not be attributed totally to the spill. Reproduction was largely normal following the spill. | 93034 and 94173 |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| B11 | Harlequin Ducks Damage Assessment Closeout | ADFG | Draft report peer reviewed; returned to PI for revision February 13, 1996. | New statistical analysis of bile results indicates elevated hydrocarbon concentrations in western Prince William Sound and Kodiak birds, but also in eastern Prince William Sound birds, compared to Juneau samples. Concentrations correlate positively with proximity to the spill origin. | Project conducted in conjunction with R71 and continued as 93033. Also related to B2, CH1B, TS1, R103, and 93036. |
| B12 | Shorebirds Damage Assessment Closeout | DOI | The results of this project will be presented in two reports:<br>(1) Final report on migrant shorebirds undergoing format review at OSPIC<br>(2) Final report on black oystercatchers available to public at OSPIC. | (1) Martin, P.D. 1993. Effects of the *Exxon Valdez* oil spill on migrant shorebirds using rocky intertidal habitats of Prince William Sound, Alaska, during Spring 1989. U.S. Fish and Wildlife Service, Anchorage.<br>(2) Andres, B.A. 1994. The effects of the *Exxon Valdez* oil spill on black oystercatchers breeding in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.<br><br>(1) Spring migrant shorebirds (surfbirds and black turnstones) escaped impacts because shorelines used by these species (particularly around Montague Island) were largely unoiled.<br>(2) Black oystercatcher breeding was disrupted and hatching success reduced. Chicks raised on oiled beaches grew more slowly than chicks raised on unoiled beaches, perhaps due to ingestion of contaminated food. | Related to R17, R103 and 93035. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| CH1A | Coastal Habitat Damage Assessment | USFS | Final report accepted by OSPIC; copies currently being made. | Highsmith, R.C., et al. Comprehensive assessment of coastal habitat. School of Fisheries and Ocean Sciences, UAF.<br><br>Serious and long-term lasting effects on intertidal algae. Recovery occurring but slow to none in upper intertidal habitat. Full recovery expected. Intertidal invertebrates indicate negative effects from spill. Intertidal fish findings were inconclusive. | Continued as R102, 93039 and 94086. |
| CH1B | Hydrocarbons in Mussels | NOAA | Final report available to public at OSPIC. | Babcock, M. NOAA. Prespill and postspill concentrations of hydrocarbons in sediments and mussels in intertidal sites in PWS and the Gulf of Alaska.<br>*Exxon Valdez* oil is located in several sites. Reductions in hydrocarbons are seen at several sites in PWS over 1989. | R103 |
| FS01 | Spawning Area Injury | ADFG | REPORT OVERDUE. Was to be submitted to Chief Scientist by August 15, 1995; then expected October 1, 1996; now delayed to February 1997. [Note: Report will present findings from both FS01 and R60B.] | Fried, S. and B. Bue<br><br>Documented oil contamination of Prince William Sound pink salmon spawning area. Improved current and historic pink salmon escapement estimates which are necessary for accurate estimates of total wild returns. For preliminary results, see 1989, 1990 and 1991 NRDA Draft Status Reports. | Project conducted in conjunction with R60B. |

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

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| FS04B | Juvenile Pinks | NOAA | Final report available to public at OSPIC. | Wertheimer, A.C., A.G. Celewycz, M.G. Carls, and M.V. Sturdevant. 1994. Impact of the oil spill on juvenile pink and chum salmon and their prey in critical nearshore habitats. NOAA, NMFS, Auke Bay Lab, Juneau, AK.<br>Documented exposure and contamination of juvenile salmon in Prince William Sound. Contamination was associated with reduced growth. Ingestion of oil or oiled prey was route of contamination. | FS4A, AW3, and ST3A. |
| FS05 | Dolly Varden Damage Assessment | ADFG | Final report available to public at OSPIC. Report includes data from R090. | Hepler, K.R., P. A. Hansen, D.R. Bernard. Impact of oil spilled from the *Exxon Valdez* on survival and growth of Dolly Varden and cutthroat trout in PWS, AK. ADF&G.<br>Two populations of Dolly Varden and cutthroat trout emigrated from lakes into the wake of the spill. Growth from 1989-1990 was 24% and 22% slower for recaptured subadult and adult Dolly Varden and 36% to 43% slower for subadult and adult populations of cutthroat trout in populations associated with the oil. This difference persisted through 1991 for cutthroat trout but not for Dolly Varden. Chronic starvation and direct exposure to petrogenic hydrocarbons were hypothesized as effects leading to reduced growth and accelerated mortality of both Dolly Varden and cutthroat trout. | Combined with R90. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| FS11 | Herring Injury | ADFG | The results of this project will be presented in 10 articles prepared for the Canadian Journal of Fisheries and Aquatic Science. In January 1997 it was decided that the articles will be peer reviewed by the Chief Scientist following their acceptance by the journal. All of the articles have been submitted to the journal and many have been accepted by the journal. The Chief Scientist is currently awaiting receipt of the accepted articles from the PI. | (1) Brown, et al. Introduction to the studies of EVOS.<br>(2) McGurk, et al. Egg-larval mortality.<br>(3) Hose, et al. Sublethal effects of EVOS on embryos and larvae: cytogenetics, etc.<br>(4) Kocan, et al. Sensitivity of embryos to PBCO.<br>(5) Norcross, et al. Distribution, abundance of larval herring in Prince William Sound.<br>(6) Kocan, et al. Reproductive success of herring.<br>(7) Brown and Debeves. Effects of EVOS on survival of herring.<br>(8) Marty, et al. Histopathology and cytogenetics.<br>(9) Brown, et al. Pacific herring in Prince William Sound after EVOS.<br>(10) Okihiro, et al. Adult histopathology.<br><br>Adult herring migrating to the spawning grounds in 1989 were exposed to oil. Exposure to oil continued throughout 1989 and into 1990. Internal tissues were damaged but the short- and long-term effects are speculative. There may have been a short-term effect which inhibited egg deposition and a long-term reproductive impairment (reduced survival of offspring). Eggs were deposited in oiled areas in 1989. Larvae hatched from exposed embryos suffered reduced survival. | Similar to 94166 (Herring Spawn Deposition). Also related to 94165 and 94320. |
| FS13 | Effects of Hydrocarbons on Bivalves | ADFG | Draft report peer reviewed; returned to PI for revision September 26, 1996. | | Clams are important prey for ducks, sea otters, river otters, and bears. This study is related to studies of these species and to 93017. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| FS27 | Sockeye Salmon Overescapement | ADFG | Final report available to public at OSPIC. | Schmidt, D.C., T.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. King, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Report, ADFG, Commercial Fisheries Management and Development Division, Soldotna, AK.<br><br>Approximately ten to fifteenfold reduction in Kenai River smolt when compared to brood year 1987. Reduced smolt production from Akalura and Red Lakes, Kodiak Island. Reduced harvests for the Kenai are forecast for 1994 with returns below escapement levels possible for 1995 and 1996. Minimal harvests of Kenai River sockeye salmon are likely. Reduced harvests are forecast for Red and Akalura Lakes for 1994 through 1996. | Continued as 93002 and 94258. R53 acquired new information to facilitate management of anticipated reduced future runs. R113 examined potential for hatchery-reared fry in Red Lake, but forecasted returns make the project unfeasible. |
| FS28 | Run Reconstruction | ADFG | Final report available to public at OSPIC. | Geiger, H., et al. Run reconstruction and life-history model.<br><br>Estimated losses to adult populations from oil damages to early life stages at 2 to 3 million in 1990, and 40 to 70 thousand in 1991. Projected losses of 100 to 200 thousand adults in 1993 and 1994. | Through this project, results from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| FS30 | Database Management | ADFG | Final report available to public at OSPIC. | DiCostanzo, C. and B.P. Simonson. 1993. Database management, *Exxon Valdez* Oil Spill Final Report, ADF&G, Division of Commercial Fisheries, Juneau, AK.<br><br>Software was written to provide access to fish harvest database using the ADFG commercial fisheries Wide-Area Network (WAN). Procedures were implemented to provide reports in numerous database, spreadsheet, and statistical formats. Documentation and guidelines for using the harvest database were completed. WAN capability is now available between Juneau, Cordova, Anchorage, Kodiak, Soldotna, and Homer. | This database provides a repository for all NRDA and restoration projects information. |
| MM1 | Humpback Whales Damage Assessment | NOAA | Final report available to public at OSPIC. | Dalheim, M. and O. von Ziegesar. 1993. Effects of the *Exxon Valdez* oil spill on the abundance and distribution of humpback whales (megaptera novaeangliae) in Prince William Sound. NMFS, Seattle, WA and North Gulf Oceanic Society, Homer, AK.<br><br>In 1989, photographic analysis of PWS humpbacks revealed 59 whales identified in 119 encounters. In 1990, 66 whales were identified in 201 encounters. The number of humpbacks encountered per day was less in 1989 and 1990 than in 1988. Because of the difference in survey effort before and after the spill, it is difficult to determine whether there was a difference in the number of humpbacks using PWS. Regarding distrubtion of whales in PWS: In 1988 and 1990, more whales used the Lower Knight Island Passage than in 1989. Increased vessel and aircraft traffic and distribution of prey may have been contributing factors for the temporary redistribution of whales during 1989. Despite considerable research effort, only one PWS humpback was documented to move from PWS to southeastern Alaska during 1989. | |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| MM2 | Killer Whales Damage Assessment | NOAA | Final report available to public at OSPIC. | Dalheim, M. and C. Matkin. 1993. Assessment of injuries to killer whales in Prince William Sound, Kodiak Archipelago, and Southeast Alaska. National Marine Mammal Laboratory, Seattle, WA and North Gulf Oceanic Society, Homer, AK.<br>In 1989, 8 resident (143 killer whales) and 4 transient pods (34 whales) were documented in 89 encounters. In 1990, 9 resident pods (148 whales) and 4 transient pods (30 whales) were identified in 80 encounters. During 1991, 7 resident pods (105 whales) and 2 transiet pods (14 whales) were identified in 54 encounters. Despite increased effort over these 3 years, the number of encounters appears to be decreasing. The missing animals were not seen near Kodiak Island or southeast Alaska. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the 1989-1991 perod. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, 4.3% in 1991, and zero in 1992. Killer whale annual mortality rates are usually less than 2%. | |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| MM6 (1of3) | Sea Otter Damage Assessment | DOI | The results of this project will be presented in 19 reports -- 15 reports have been accepted by the Chief Scientist (14 are available to the public at OSPIC); 3 reports have been peer reviewed and returned to the PIs for revision; 1 report has been revised by the PI and resubmitted to theChief Scientist. | (1) Ballachey, B.E. Biomarkers of damage to sea otters in PWS following potential exposure to oil spilled from the T/V *Exxon Valdez*. [Final report available to public at OSPIC.]<br>(2) Ballachey, B.E. and D.M. Mulcahy. Hydrocarbon residues in tissues of sea otters (*Enhydra lutris*) collected from southeast Alaska. [Draft report peer reviewed; returned to PI for revision March 25, 1996; redraft expected January 31, 1997.]<br>(3) Ballachey, B.E. and D. M. Mulcahy. Hydrocarbons in hair, livers and intestines of sea otters (*Enhydra lutris*) found dead along the path of the *Exxon Valdez* oil spill [Draft report peer reviewed; returned to PI for revision March 25, 1996; redraft expected January 31, 1997.]<br>(4) Bodkin, J.L., D.M. Mulcahy and C. Lensink. Age-specific reproduction in female sea otters (*Enhydra lutris*) from southcentral Alaska: analysis of reproductive tracts. [Final report available to public at OSPIC.]<br>5) Bodkin, J.L. and M.S. Udevitz. An intersection model for estimating sea otter mortality from the *Exxon Valdez* oil spill along the Kenai Peninsula. [Final report available to public at OSPIC.] | Continued as 93043. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| MM6(2of3) | Sea Otter Damage Assessment | DOI | See MM6(1of3). | (6) Burn, D.M. Boat-based population surveys of sea otters (*Enhydra lutris*) in PWS in response to the *Exxon Valdez* oil spill. [Report accepted by Chief Scientist; not yet at OSPIC.]<br>(7) DeGange, A.R., D.C. Douglas, D.H. Monson and C. Robbins. Surveys of sea otters in the Gulf of Alaska in response to the *Exxon Valdez* oil spill. [Final report available to public at OSPIC.]<br>(8) Doroff, A.M. and J.L. Bodkin. Sea otter foraging behavior and hydrocarbon levels in prey following the *Exxon Valdez* oil spill in PWS, Alaska [Draft report revised by PI; resubmitted to Chief Scientist January 13, 1997.]<br>(9) Doroff, A.M. and A.R. DeGange. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the *Exxon Valdez* oil spill. [Final report available to public at OSPIC.]<br>(10) Lipscomb, T.P., R.K. Harris, R.B. Moeller, J.M. Fletcher, R.J. Haebler and B.E. Ballachey. Histopathologic lesions associated with crude oil exposure in sea otters. [Final report available to public at OSPIC.]<br>(11) Lipscomb, T. P., R.K. Harris, A.H. Rebar, B.E. Ballachey and R.J. Haebler. Pathological studies of sea otters. [Final report available to public at OSPIC.]<br>(12) Monnett, C. and L.M. Rotterman. Movements of weanling and adult female sea otters in PWS after the *Exxon Valdez* oil spill. [Final report available to public at OSPIC.] | |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| MM6(3of3) | Sea Otter Damage Assessment | DOI | See MM6(1of3). | (13) Monnett, C. and L.M. Rotterman. Mortality and reproduction of female sea otters in PWS. [Final report available to public at OSPIC.]<br>(14) Monnett, C. and L.M. Rotterman. Mortality and reproduction of sea otters oiled and treated as a result of EVOS. [Final report available to public at OSPIC.]<br>(15) Monson, D.H. and B.E. Ballachey. Age distributions and sex ratios of sea otters found dead in PWS following the *Exxon Valdez* oil spill. [Final report available to public at OSPIC.]<br>(16) Mulcahy, D.M. and B.E. Ballachey. Hydrocarbon residues in tissues of sea otters (*Enhydra lutris*) collected following the *Exxon Valdez* oil spill. [Draft report peer reviewed; returned to PI for revision March 25, 1996; redraft expected January 31, 1997.]<br>(17) Rebar, A.H., B.E. Ballachey, D.L. Bruden and K.A. Kloecker. Hematology and clinical chemistry of sea otters captured in PWS following the *Exxon Valdez* oil spill. [Final report available to public at OSPIC.]<br>(18) Rotterman, L.M. and C. Monnett. Mortality of sea otter weanlings in eastern and western PWS during the winter of 1990-91. [Final report available to public at OSPIC.]<br>(19) Udevitz, M.S., J.L. Bodkin and D.P. Costa. Detection of sea otters in boat based surveys in PWS. [Final report available to public at OSPIC.] | |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| R011 | Murre Recovery Monitoring | DOI | Final report available to public at OSPIC. | Dragoo, D.E., G.V. Byrd, D.G. Roseneau, D.A. Dewhurst, J.A. Cooper, and J.H. McCarthy. 1994. Population levels and reproductive performance of murres based on observations at breeding colonies four years after the T/V *Exxon Valdez* oil spill. U.S. Fish and Wildlife Service. Homer<br>Numbers of murres breeding at major colonies within the trajectory remained lower in 1992. Breeding chronology was delayed. Productivity at the Barren Islands was higher than in other postspill years, but still lower than normal. Productivity at Puale Bay was normal. | Continued as 93022 and 94039. Also related to B3. |
| R015 | Marbled Murrelet Restoration Study | DOI | The results of this project will be presented in two reports:<br>(1) Final report available to public at OSPIC.<br>(2) Final report available to public at OSPIC. | (1) Kuletz, K.J., D.K. Marks, and N.L. Naslund. 1994. At-sea abundance and distribution of marbled murrelets in the Naked Island area, Prince William Sound, Alaska, in Summer, 1991 and 1992. U.S. Fish and Wildlife Service, Anchorage<br>(2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the *Exxon Valdez* oil spill zone. U.S. Fish and Wildlife Service, Anchorage.<br><br>Using ground search techniques, 10 tree nests were found on Naked Island in 1991 and 1992. Nest trees were in stands of high volume and size class trees, and upland activity of murrelets throughout Prince William Sound was highest in such stands. | Continued as part of 93051 and 94505 (closeout). |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| R047 | Stream Habitat Assessment | ADFG | Final report available to public at OSPIC. | Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. ADF&G.<br><br>About 250 km of shoreline and 260 km2 of uplands were surveyed for anadromous fish streams on private lands on Afognak Island, resulting in discovery of 167 anadromous streams totaling about 56 km. Stream habitat parameters and upper extents of anadromous distribution were documented, and streams were mapped by GPS. | Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection. |
| R053 | Kenai River Sockeye Salmon Restoration | ADFG | Final report available to public at OSPIC. | Tarbox, K., et al. Kenai River sockeye salmon restoration.<br><br>Successful collection of baseline and fishery samples for genetic stock identification. Unsuccessful in choosing new adult in-river hydroacoustic equipment. Successful hydroacoustic enumeration of returning adult salmon in Upper Cook Inlet. | R59 analyzed genetic samples collected by this project. |
| R059 | Genetic Stock Identification | ADFG | Annual report peer reviewed; available to public at OSPIC. | Seeb, J. and L. Seeb. Assessment of genetic stock structure of salmonids. ADF&G. June 1993.<br><br>Genetic data were collected during 1992 from spawning populations contributing to mixed-stock harvests of sockeye salmon in Cook Inlet. These data can be used to estimate the presence of Kenai River stocks in mixed-stock areas of Upper Cook Inlet. | R53 collected spawning samples. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R060A/B | Prince William Sound Pink Salmon | ADFG | R060A: Final report available to public at OSPIC.<br>R060B: Findings will be presented in report being prepared under Project FS01. | R060A: Sharr, S., et al. Coded wire tag studies on PWS salmon, 1992.<br>R060B: See FS01.<br><br>R060A: The CWT program helped reduce the commercial harvest on damaged pink salmon populations by providing fishery managers with timely inseason fishery stock composition estimates.<br>R060B: The escapement project provided improved pink salmon escapement information which was essential for the precise fisheries management required to protect damaged wild stocks. | Continued as 93067, 94184 (report preparation) and 94320B. Also related to R60C, which monitors and investigates mechanisms for oil damage to early life stages of pink salmon populations. |
| R060C | Pink Salmon Egg/Fry | ADFG, NOAA | The results of this project will be presented in two reports:<br>(1) ADFG report available to public to OSPIC.<br>(2) NOAA findings included in annual report prepared under 94191. See 94191 for status. | (1) Sharr, Samuel and C. Peckham. 1994. Coded wire tag studies on Prince William Sound salmon, 1992. ADFG<br>(2) See 94191.<br><br>(1) Persistence of elevated mortalities among embryos in oiled streams versus those in unoiled streams suggests genetic damage.<br>(2) Oil exposures completed for 1992 and 1993 brood years. All 1992 brood pinks died from bacterial kidney disease by June 1994. Spawning of 1993 brood expected in September 1995, with survival of progeny to be determined in early 1996. | Continued as 93003 and 94191. Other related projects include B11, CH1B, R60AB, R103, and 93036. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R071 | Harlequin Duck Restoration and Monitoring | ADFG | Draft final report submitted to Chief Scientist April 15, 1996. | Rothe, T. Breeding ecology of harlequin ducks in PWS, Alaska. ADF&G.<br>Crowley, D.W. 1993. Breeding habitat of harlequin ducks in PWS, AK. MS Thesis. Oregon State University, Corvallis, OR.<br><br>Comparative harlequin data in eastern Prince William Sound for B11. 1991-1992 harlequin production in eastern Prince William Sound similar to prespill. Techniques devised to capture and track harlequins. Breeding stream parameters and nest sites described. Additional oiled mussel beds identified. Description and analysis of harlequin breeding stream habitat in eastern PWS produced in an M.S. thesis, Oregon State University (Crowley 1994). | B11 corroborated harlequin status in Prince William Sound. R103 documented continued oiled prey. B2 cooroborates harlequin status in PWS. |
| R073 | Harbor Seals | ADFG | Final report available to public at OSPIC. | Frost, K.J. and L.F. Lowry. 1994. Assessment of injury to harbor seals in PWS and adjacent areas following EVOS. ADF&G, Wildlife Conservation Division, Fairbanks, AK.<br><br>Harbor seals continued to use heavily oiled haulouts even when unoiled sites were available nearby. They were observed to give birth and care for their pups on these sites. The pelage of both pups and adults became oiled when they used these sites or contacted oil in the water. However, the pelage became cleaner with time if they did not continue to use oiled sites. Many carcasses recovered were either stillborn or died shortly after birth. Observations suggest that stress and/or toxic effects of oil resulted in abortions, premature births, and increased mortalities in heavily oiled areas. Four book chapters prepared and in press detailing results of MM5 study. | Started in 1989 as MM5. Continued as 93046 and 94064. |

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

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R102 | Herring Bay Experimental and Monitoring Study | ADFG | Final report available to public at OSPIC. | Highsmith, R.C., M.S/ Stekoll, A.J.Hooten, P. van Tamelen, L. Deysher, L. McDonald, D. Strickland and W.P. Erickson. 1993. Herring Bay experimental and monitoring studies. School of Fisheries and Ocean Sciences, UAF.<br>Cover of the dominant intertidal alga, *Fucus gardneri,* was reduced at oiled/cleaned sites. *Fucus* recruitment was poor in the mid- to upper intertidal, probably due to lack of shelter from desiccation and heating by adult plants. Limpet densities continued to be lower in the upper intertidal. Recovery appeared to be occurring in the lower intertidal zone in 1990-1991 and in the upper intertidal in 1993. Results have been incorporated into an interaction web to elucidate potential oil spill effects on community dynamics. | Continued as 93039 and 94086. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R103 | Oiled Mussels | ADFG, NOAA, DOI | The results of this project will be presented in four reports:<br>(1) NOAA annual report peer reviewed; available to public at OSPIC.<br>(2) DOI/FWS findings being incorporated into report on 93035.<br>(3) ADFG final report available to public at OSPIC.<br>(4) DOI/NPS final report accepted by Chief Scientist. Not yet at OSPIC. | (1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the *Exxon Valdez* oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska.<br>(2) See 93035.<br>(3) Faro, J.B., R.T. Bowyer, et al. 1994. River otter component of the oiled mussel bed study.<br>(4) Irvine, G. 1993 Geographic extent and recovery monitoring of intertidal oil in mussel beds in Gulf of Alaska effected by the *Exxon Valdez* oil spill.<br><br>(1) Identified 27 mussel beds within PWS with total petroleum hydrocarbons greater than 10,000 mg/g wet weight. Site manipulation was conducted at three heavily oiled mussel beds. (2) Black oystercatcher chicks raised on oiled sites grew more slowly than chicks raised on unoiled sites. (3) Differences in levels of blood haptoglobin and Interleukin-6 ir, previously found to be elevated in river otters inhabiting oiled compared to nonoiled areas in PWS, were not observed in summer 1992. River otters from oiled areas continued to regain body size from levels noted in 1990. Suggests that river otters may be recovering from chronic effects that were observed in 1990 and 1991. | Continued as 93036, 94090, and 95090. |
| R104A | Site Stewardship | DOI | Final report available to public at OSPIC. | Corbett, D.G. 1994. Development of the Alaska Heritage Stewardship Program for protection of cultural resources at increased risk due to the *Exxon Valdez* oil spill. U.S. Fish and Wildlife Service, Anchorage, AK.<br>Increased public knowledge of archaeological sites following the spill led to increased vandalism. A stewardship program to train local residents to protect cultural resources was developed. | 93006, 94007 |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R105 | Instream Survey Restoration Implementation Planning | ADFG, USFS | The results of this project will be presented in two reports (report writing funded under 93063):<br>(1) Final report available to public at OSPIC.<br>(2) USFS report accepted by Chief Scientist. Not yet at OSPIC. | (1) Willette, M. Survey and evaluation of instream habitat and stock restoration techniques for wild pink and chum salmon.<br>(2) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish.<br><br>A number of sites were reviewed, evaluated, and ranked for possible instream restoration efforts. A number of efforts have subsequently been implemented. | Continued as 93063. |
| R106 | Dolly Varden Restoration | ADFG | Final report available to public at OSPIC. | McCarron, S. and A.G. Hoffman, 1993. Technical support study for the restoration of Dolly Varden and cutthroat trout populations in PWS. ADF&G, Division of Sport Fish, Anchorage, AK.<br>The nature and extent of injury to Dolly Varden and cutthroat trout was documented in FS5. The goal of R106 was to provide information for developing a management plan to protect impacted stocks, while allowing for continued recreational fishing for sport anglers where stocks could support fisheries. Sixty-one streams were surveyed to provide this information. | FS5 and 94139. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| R113 | Red Lake Sockeye Salmon Restoration | ADFG | Project canceled based on findings of FS27. | Red Lake does not need restoration effort. This project was funded in anticipation of poorer returns of sockeye salmon to Red Lake than actually occurred. | Related to FS27. NEPA compliance for Red Lake restoration project was funded through 93030, which was canceled when the project was dropped. |
| RT | Restoration Team | ALL | No report required. | | |
| ST1A | Subtidal Sediments | NOAA | Final report available to public at OSPIC. | O'Clair, et al. NOAA. Petroleum hydrocarbon induced injury to subtidal sediment resources.<br><br>Subtidal sediments have been found to be contaminated at no fewer than 15 sites within Prince William Sound by June 1990. Contamination had reached at least 20 meters at some sites. Evidence of hydrocarbon movement downslope into subtidal sediments was detected by 1991. | Continued as 93047 and 94285. Other related projects include ST1B. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| ST1B | Subtidal Microbial | ADEC | Final report available to public at OSPIC. | Braddock, Joan F., B. Rasley, T. Yeager, J. Lindstrom, D. Brown. Hydrocarbon mineralization potentials and microbial populations in marine sediments following the *Exxon Valdez* oil spill. DEC<br>The numbers and activity of oil-degrading microorganisms were measured in sediments periodically for two years after the oil spill. Populations of oil-degrading microorganisms were significantly higher in sediments collected at oiled sites relative to reference sites. This information is useful in establishing the extent of contamination of the oil with time and also provides evidence that biodegradation is occurring naturally in Prince William Sound. | 93047 |
| ST2A | Shallow Benthic | ADFG | No report required. (Data/findings incorporated into report on 93047.) | See 93047.<br>At oiled sites there was a decrease in some subtidal organisms relative to unoiled sites. Partial recovery observed in 1991. | Continued as 93047 and 94285. Other related projects include B11, CH1A, R103, and TM3. |
| ST2B | Deep Water Benthic | ADFG | Final report available to public at OSPIC. | Feder, H. 1995. Injury to deep benthos. ADFG<br>No indication of oil-related damage to deep benthic environment. No oil fractions appear related to unusual benthic faunal composition. Differences between stations within and outside of oil trajectory were mainly related to sediment differences. No oil effects demonstrated. | CH1A, ST1B, ST2A, ST4, ST5, ST6, ST7, ST8, and TS1. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| ST3A | Caged Mussels Damage Assessment | NOAA | The results of this project will be presented in two reports:<br>(1) Final report available to public at OSPIC.<br>(2) Final report available to public at OSPIC. | (1) Petroleum hydrocarbons in near surface seawater of PWS: chemical sampling and analysis.<br>(2) Petroleum hydrocarbons in near surface seawater of PWS: analysis of caged mussels.<br><br>Mussels transplanted along spill trajectory accumulated particulated oil at concentrations that decreased with depth, elapsed time, and distance from heavily oiled beaches. In 1990 and 1991, low concentrations of polynuclear aromatic hydrocarbons were sporadically detected at locations adjacent to heavily oiled beaches. Petroleum hydrocarbons were detected only sporadically in mussels deployed in locations outside Prince William Sound in 1989. | AW3, ST3B |
| ST3B | Sediment Traps Damage Assessment | ADEC | Final report available to public at OSPIC. | Sale, David M., J. Gibeaut, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the *Exxon Valdez* oil spill. ADEC<br>The subtidal sediment trap study demonstrated that oiled particulate matter derived from oil-impacted beaches in Prince William Sound contaminated adjacent subtidal sediments. The study further showed that the transfer rate of oil from beach to subtidal sediment was highest the year following the spill, and declined steadily thereafter. | ST3A and ST4 |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| ST4 | Fate and Toxicity Damage Assessment | NOAA | Final report available to public at OSPIC. | Fate and toxicity of spilled oil from the *Exxon Valdez*. 1994.<br><br>Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of *Exxon Valdez* oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely. | AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies. |
| ST5 | Shrimp | ADFG | Final report available to public at OSPIC. | Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp. ADF&G, Commercial Fisheries Management and Development Division, Anchorage, AK.<br><br>Hydrocarbon analyses did not detect oil contamination with sampled spot shrimp. Shrimp collected in unoiled areas had more inflammatory gill lesions than did shrimp from the oiled area. These results indicate that oil contamination had little or no effect on spot shrimp. | |
| ST6 | Rockfish Damage Assessment | ADFG | Final report available to public at OSPIC. | Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91.<br><br>Oil was determined to be the cause of death for a small number of demersal rockfish in Prince William Sound. Dead and dying rockfish were reported from the spill area. Of the five fish that were fresh enough to be necropsied, exposure to crude oil was found to be the cause of death. These results prompted additional testing for hydrocarbons in live fish. These tests showed at least 11 of 36 rockfish tested from oiled sites had been exposed to oil within 2 weeks prior to testing. None of the 13 fish from unoiled sites were exposed to oil. Subsequent studies showed some indications of sublethal injuries to rockfish from exposure to oil. | ST2A and ST2B |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| ST7 | Demersal Fishes Damage Assessment | NOAA | Final report available to public at OSPIC. | Collier, T. Assessment of oil spill impacts on fishery resources: measurement of hydrocarbons and their metabolites, and their effects, in important species. NOAA<br>Results show continuing exposure of several benthic fish species and pollock, suggesting continuing petroleum contamination of subtidal sediments, water and food in 1990 and 1991 at sites up to 400 miles from the spill origin. | ST1A |
| ST8 | Sediment Data Synthesis | NOAA | Draft final report submitted to Chief Scientist November 25, 1996; under peer review. Report includes electronic hydrocarbon database with a user manual; a manuscript submitted for publication in the Journal of Environmental Science and Technology; and desciptive documentation. | Short, J. Mussel tissue and sdeiment hydrocarbon data synthesis, 1989-1995. NOAA.<br>Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of *Exxon Valdez* oil. | TS1, TS3, and 93053. |
| TM3 | River Otter and Mink Damage Assessment in Prince William Sound | ADFG | Final report available to public at OSPIC. | Faro, J.B., R.T. Bowyer, J.W. Testa, and L.K. Duffy. Assessment of injury to river otters in PWS, AK following the *Exxon Valdez* oil spill. ADF&G<br>The results indicate that differences in home range, habitat selection, and latrine site abandonment, as well as changes in food habits, occurred in river otters. | CH1B and R103 |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| TS1 | Hydrocarbon Analysis | NOAA | Report being prepared under ST8. | See ST8.<br><br>Coordinated the chemical analysis of all samples collected by damage assessment studies to develop a single set of analytical data comparable across projects. | ST8, TS3, and B08. |
| TS3 | GIS Mapping and Analysis: Damage Assessment | ADNR | No report required. | Provided mapping and database support for damage assessment projects. | Supported numerous damage assessment projects, including FS 4, FS13, CH1A and R47. |

# *Exxon Valdez* Oil Spill Project Status Summary
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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93002 | Sockeye Salmon Overescapement | ADFG | Annual report (funded under 94258) peer reviewed; available to public at OSPIC. | Schmidt, D., et al. Sockeye salmon overescapement.<br>Red Lake 1994 plankton indicate downward trend associated with increased sockeye salmon fry recruitment. May suggest increased smolt production in 1995 likely. Akalura Lake failed to meet escapement goals. Adult return to Red Lake accurately forecasted by smolt program. Kenai River adult return forecast with large bounds because of uncertainty of smolt production in 1990. | Project is continuation of FS27, 93002. Continued as 94258. |
| 93003 | Salmon Egg to Pre-emergent Fry Survival | ADFG NOAA | The results of this project will be presented in two reports (funded under 94191):<br>(1) ADFG report available to public at OSPIC.<br>(2) NOAA results included in report prepared under 94191. See 94191 for status. | (1) Sharr, S. and J.E. Seeb. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound.<br>(2) See 94191.<br>Oil exposures completed for 1992 and 1993 brood years. 1992 brood pink salmon died from bacterial kidney disease; spawning not possible. Precautions to ensure survival of 1993 brood have been taken. Persistence of elevated embryo mortalities in oiled streams in 1992 indicate possible genetic damage to wild pink salmon populations from the *Exxon Valdez* oil spill. Preliminary laboratory studies support the genetic hypothesis. Additional laboratory studies demonstrate dose response of pink salmon embryos when incubated in gravel exposed to crude oil from the *Exxon Valdez*. | Started in 1989 as FS2 and continued as R60C and 94191. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93006 | Site Specific Archaeological Restoration | DOI/ NPS | REPORT (funded under 94007) OVERDUE. | Birkedahl, T., et al. 1993. Archaeological site monitoring and restoration.<br><br>Archaeological restoration assessments conducted at 14 sites in 1993 suggest that a majority of the archaeological vandalism that can either be directly or indirectly linked to the *Exxon Valdez* oil spill event occurred in 1989 before adequate constraints were put into place over the activities of oil spill clean-up personnel. Most vandalism took the form of "prospecting" for high yield sites. In 1993, only two of the 14 sites visited showed signs of continued vandalism and the link between this recent vandalism and the *Exxon Valdez* oil spill event remains highly problematical. Oil monitoring samples from the archaeological sites have not been processed as of this date, but oil was still visible to the naked eye in the intertidal zones of two of the 14 sites visited. | Continued as 94007. |
| 93012 | Genetic Stock Identification of Kenai River Sockeye Salmon | ADFG | Draft final report (which also contains results of genetics component of 94255) submitted to Chief Scientist May 3, 1996; under peer review. | Genetic data were collected during 1992 and 1993 from spawning populations contributing to mixed-stock harvest of sockeye salmon in Cook Inlet. These data were used in a pilot study to estimate the component of Kenai River stocks harvested in mixed-stock areas of Upper Cook Inlet. | Began as R52. Continued as 94504. Spawning samples collected under 93015. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93015 | Kenai River Sockeye Salmon Restoration | ADFG | Annual report peer reviewed; available to public at OSPIC | Tarbox, K., et al. Kenai River sockeye salmon restoration.<br>Successful collection of baseline and fishery genetic samples. Successful in-season hydroacoustic survey of Upper Cook Inlet by subcontractor. | Began as R52 and continued as 94255. Genetic samples analyzed under 93012. |
| 93016 | Chenega Bay Chinook and Silver Salmon (NEPA Compliance) | ADFG | No report required (NEPA compliance only). | | Continued as 94272. Also related to 93017. |
| 93017 | Subsistence Food Safety Survey and Testing | ADFG | Final report available to public at OSPIC. | Miraglia, R.A. 1995. Subsistence restoration project. ADF&G, Division of Subsistence, Anchorage, AK.<br>First round of tests for hydrocarbon contamination of subsistence resources showed little or no contamination. Results of second round of testing are pending. The observations of abnormalities in the tested resources caused a shift in concerns of subsistence users from oil contamination to what effects these abnormalities have on these resources. A series of public meetings were held in communities to locate sites and species of concern. | Continued as 94279. |
| 93024 | Restoration of Coghill Lake Sockeye Salmon Stock | ADFG | Redraft of final report submitted to Chief Scientist May 21, 1996; under peer review. | Monitoring showed the need for modifying both the type and concentrations of fertilizer. | Continued as 94259 and 95259. |
| 93032 | Cold Creek Pink Salmon Restoration (NEPA Compliance) | ADFG | Project canceled. | | R105 |



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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| 93033 | Harlequin Duck Restoration | ADFG | The results of this project will be presented in two reports (funded under 94066):<br>(1) Report on Afognak habitat assessment and PWS production survey peer reviewed and returned to PI November 14, 1995.<br>(2) REPORT OVERDUE. Analyses of blood and physiological samples from 1993 collections not completed by UC-Davis) not received. This contract work is delinquent. | (1) Restoration monitoring of harlequin ducks in PWS and Afognak Island.<br>Only 3 harlequin broods observed in western Prince William Sound; 14 in eastern Prince William Sound. Decreased numbers of harlequins molting in western Prince William Sound in July. Suspect incomplete gonadal development in pre-nesting western Prince William Sound harlequins. Blood/physiological analysis and hydrocarbon analyses in process. Harlequin breeding stream/nest site model in preparation. Harlequin breeding assessment completed on North Afognak Island. | Started in 1989 as B11 and continued as R71. 94427 and 96427 continue harlequin brood surveys. |
| 93034 | Pigeon Guillemot Recovery | DOI | Report (funded under 94506) available to public at OSPIC. | Sanger, G.A. and M.B. Cody. 1994. Survey of pigeon guillemot colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service, Anchorage.<br>One hundred eighty-four colonies, concentrated in southwest Prince William Sound and at Naked Island, were identified. This colony survey confirmed that the present population of pigeon guillemots in Prince William Sound is 3,000 - 4,900. | Continued as 94173. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93035 | Black Oystercatchers / Oiled Mussel Beds | DOI | Revised draft resubmitted to Chief Scientist October 28, 1996; under peer review. Report also includes findings from R103. | Andres, B. 1993. Potential impactsof oiled mussel beds on higher organisms: black oystercatchers. US Fish and Wildlife Service, Anchorage, AK. Growth rates of oystercatcher chicks were lower on oiled than unoiled nest sites. Some alphatic compounds were detected in 1992 fecal samples from oiled sites. Breeding pairs increased on oiled Green Island from 1992 to 1993 but decreased on Knight Island from 1991 to 1993. | Continued as 94020. |
| 93036 | Oiled Mussel Beds | DOI, NOAA | The results of this project will be presented in two reports: (1) DOI results will be included in report being prepared under 95090; see 95090 for status. (2) Annual report peer reviewed; available to public at OSPIC. | (1) See 95090. (2) Babcock, M. Recovery monitoring and restoration of oiled mussel beds in PWS, Alaska. In 1992 and 1993, mussels and sediments from 70 mussel beds in PWS were sampled. Sediments collected from 31 of the oiled beds had total petroleum hydrocarbon concentrations greater than 10,000 ng/g wet weight. The highest concentrations were in sediments collected from Foul Bay (62,258 +/- 1,272 ng/g total polynuclear hydrocarbons). Minimally intrusive site manipulation was conducted at three heavily oiled mussel beds. Preliminary evaluations indicate these methods were not effective in reducing petroleum hydrocarbons adjacent to manipulated areas. Along the Kenai and Alaska Peninsulas, 15 mussel beds were sampled--four of which were new sites--and four of these beds showed total petroleum hydrocarbons in excess of 5,000 ng/g wet weight. | Continued as 94090. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
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| 93038 | Shoreline Assessment | ADEC | REPORT OVERDUE. Draft report peer reviewed; returned to PI for revision January 26, 1996. | Piper, E., et al. 1993 shoreline assessment.<br><br>Surface oil has become stable. Subsurface oil has decreased substantially since 1991. Oiling is discontinuous throughout the study site. | |
| 93039 | Herring Bay Experimental and Monitoring | ADFG | Results will be presented in report being prepared under 95086; see 95086 for status. | Examination of dominant intertidal alga, *fucus gardneri,* has shown that larger plants were removed from intertidal in areas affeced by spill/clean-up. Where *fucus* cover was reduced, abundance of ephemeral algae often increased. Populations of grazing invertebrates, e.g., limpets and periwinkles, showed reduced densities at oiled sites in upper intertidal. Initially, barnacle recruitment was lower in quadrats on tar-covered rocks than clean quadrats, but differences disappeared at most sites over time. *Fucus* germlings and filamentous algae continued to have lower densities and percent cover on oiled than non-oiled substrates. Recovery occurring in lower/middle intertidal zones and normal community interactions returning. Upper intertidal continues to exhibit damage; recovery may take additional 2-5 years. | Evolved from CH1A and R102 and continued as 94086. |
| 93041 | Comprehensive Monitoring | NOAA | Project discontinued. | | |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93042 | Killer Whale Recovery | NOAA | Final report available to public at OSPIC. | Dalheim, M.E. 1994. Assessment of injuries and recovery monitoring of Prince William Sound killer whales using photo-identification techniques. National Marine Mammal Laboratory, Seattle, WA. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the period 1989-1991. Despite considerable searching effort in PWS and Southeast Alaska, the missing whales have not been observed. Given the stability of resident pods, it is assumed the missing whales are dead. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, and 4.3% in 1991. Zero mortality occurred in 1992 and 1993. The adult annual mortality rate of killer whales is usually less than 2%. Annual pod mortality rates on the order of 20% are unprecedented for North Pacific killer whales. | Close-out/report writing funded under 94092. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93043 | Sea Otter Demographics and Habitat | DOI (NBS) | The results of this project will be presented in three reports (funded under 94246):<br>(1) Data on recovery of sea otter carcasses being presented in MM6 (#15).<br>(2) Final report available to public at OSPIC.<br>(3) Final report on sea otter demographics available to public at OSPIC. | (1) See MM6(#15).<br>(2) Bodkin, J.L. and M.S. Udevitz. 1993 trial aerial survey of sea otters in PWS, Alaska. 1994. NBS, Anchorage, AK.<br>(3) Udevitz, M.S. , B.E. Ballachey, and D. L. Bruden. 1995. A population model for sea otters in western PWS. USNBS. Anchorage, AK.<br>Aerial survey of sea otters in Prince William Sound completed summer 1993; estimated abundance is approximately 18,000. Age distribution of sea otter carcasses recovered in spring 1993 in western Prince William Sound is similar to prespill distribution. Age- and sex-specific survival rates generated from carcass data for sea otters in Prince William Sound. | Report writing funded under 94246. |
| 93045 | Marine Bird / Sea Otter Surveys | DOI | Final report available to public at OSPIC. | Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the *Exxon Valdez* oil spill. U.S. Fish and Wildlife Service, Anchorage.<br>Overall marine bird population estimates in Prince William Sound have not changed significantly since 1989, but were 41% lower than 1972-1973 estimates. Rates of increase of goldeneyes and surfbird populations were higher in the unoiled zone of Prince William Sound than in the oiled zone, whereas oystercatchers increased more rapidly in the oiled zone. | Started as part of B2 and continued as 94159. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93046 | Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS | ADFG | Final report (funded under 94064) available to public at OSPIC. | Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG<br>Counts of seals at 25 trend sites in Prince William Sound were similar during pupping and molting in 1992 and 1993. However, 1993 pupping counts were 23% lower than in 1989. Molting counts were similar to 1989 postspill counts, but 27% lower than 1988 counts. Sixteen seals satellite-tagged since 1992 indicate that seals in central Prince William Sound haul out and feed near the same sites with little movement to other areas. Feeding usually occurs in depths of 100-200 meters, with a maximum recorded dive depth of 404 meters. | Started in 1989 as MM5, which was closed out as R73. Continued as 94064. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93047 | Subtidal Monitoring | ADEC, ADFG, NOAA | The results of this project will be presented in three reports (funded under 94285):<br>(1) NOAA sediments - Final report available to public at OSPIC.<br>(2) ADEC microbiology - Final report available to public at OSPIC.<br>(3) ADFG eelgrass - Final report available to public at OSPIC. | (1) Recovery of sediments in the subtidal sediment environment inside PWS.<br>(2) Braddock, J. Microbiology of subtidal sediments: monitoring and microbial populations.<br>(3) Jewett, S., et al. The effects of the *Exxon Valdez* oil spill on shallow subtidal communities in PWS 1989-93.<br>As a follow-up to previous studies from 1989-1991, the numbers and activity of oil-degrading microorganisms were measured in sediments collected in 1993. Preliminary results suggest some contamination remains in subtidal sediments. However, generally very low numbers were found where visible oil was present (e.g., subsurface sediments, Northwest Bay). Analysis of 1993 eelgrass data complete. Several infaunal and epifaunal taxa more abundant in oiled bed sites than control sites. Amphipods less abundant in oiled sites. Sea urchins are more abundant. *Hemosiderosis* in fishes from oiled sites. | Started as ST1A and continued as 94285. Report writing under 94285. |
| 93049 | Monitor Murre Colony Recovery | DOI/ FWS | Final report available to public at OSPIC. | Roseneau, D. 1995. Common murre Restoration monitoring in the Barren Islands, Alaska, 1993. U.S. Fish and Wildlife Service, AK Maritime NWR, Homer, AK.<br>Murre productivity in the Barren Islands was 0.4 - 0.6 chicks per nest site in 1993, up from near zero in 1989. Population counts on plots were similar to or higher than in previous postspill years. | Started as R11 and continued as 94039. (Formerly in EVOS database as 93022.) |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 93051 | Habitat Information for Anadromous Streams and Marbled Murrelets | ADFG, DOI, USFS | The results of this project will be presented in 5 reports (funded under 94505):<br>(1) ADFG Stream Habitat Assessment/PWS & Lower Kenai- Final report available to public at OSPIC.<br>(2) USFS Habitat Protection Info. for Channel Type Classification Study- findings included in report prepared under 95505B. See 95505B for results.<br>(3) DOI Pilot Study on Capture and RadioTagging of Murrelets in PWS- Final report accepted by Chief Scientist; not yet at OSPIC.<br>(4) DOI Information Needs for Habitat Protection: Marbled Murrelet Habitat Identification -Final report available to public at OSPIC.<br>(5) USFS Upland Nesting Habitat of Marbled Murrelet - Final report available to public at OSPIC. | (1) Sundet, K., et al. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula. ADFG<br>(2) See 95505B.<br>(3) Burns, R.A., et al.1994. Pilot study on the capture and radio tagging of murrelets in PWS, AK, July and August, 1993. U.S. Fish and Wildlife Service, Anchorage, AK.<br>(4) Kuletz, K.J., et al. Information needs for habitat protection: marbled murrelet habitat identification. 1994.<br>(5) Characterization of the upland nesting habitat of the marbled murrelet in the *Exxon Valdez* spill area.<br>Late season surveys, sites at the heads of bays, low elevations, high percentages of forest cover, and large trees were all consistent predictors of high murrelet activity. Radar performed better than humans in detecting murrelets and was cheaper than boat-based or ground-based surveys by humans. About 995 km of shoreline and 117 km$^2$ of uplands were surveyed for anadromous fish streams on private lands on the lower Kenai Peninsula and in Prince William Sound, resulting in discovery of 186 anadromous streams totaling about 57 km. Stream habitat parameters were collected along all streams, upper extents of anadromous distribution were documented and streams were mapped by GIS. | Evolved from R15 and R47. Also related to 93045. Project closeout in FY 94 as 94505 and in FY95 as 95505B. |

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

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

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

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94007 | Site Specific Archaeological Restoration | ADNR | The results of this project will be presented in two reports (funded under 95007A):<br>(1) Site protection plan available to public at OSPIC.<br>(2) Annual report peer reviewed; available to public at OSPIC. | (1) Bittner, J.E. and D.R. Reger. 1995. The 1994 EVOS report, spill area site and collection plan. ADNR, Anchorage, Alaska.<br>(2) Reger, D. 1994. Archaeological site monitoring and restoration.<br>Monitoring: ADNR monitored seven sites on Shuyak Island and Outer Kenai Coast (including three at Nuka Island) and found oil but no evidence of new disturbance. USFWS monitored six sites on Afognak Island and found no indication of new vandalism. NPS monitored two sites, McArthur Pass in Kenai Fjords National Park and Cape Gull on the Katmai coast, and found no new damage.<br>Data Recovery: USFS began restoration of two sites in PWS: SEW-440 and SEW-448.<br>Site Protection Plans: ADNR compiled information about the need for site protection, with emphasis on adequate curation of collections in the spill area. | Continuation of 93006. |
| 94020 | Black Oystercatcher Interaction with Intertidal | DOI | Project is close-out/report writing for 93035. See 93035 for status. | See 93035. | Close-out/report writing for 93035. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94039 | Common Murre Population Monitoring | DOI/FWS | Revised draft of final report (funded under 95039) submitted to Chief Scientist October 4, 1996; under peer review. | Roseneau, D.G., A.B. Kettle, and G.V.Byrd. Common murre restoration monitoring in the Barren Islands, Alaska in 1994. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK<br><br>In 1994, complete censuses and replicate index plot counts were made at the East Amatuli Island-Light Rock and Nord Island murre colonies. Although a marginally significant increasing trend was found over the 6-year post-spill period at one 2-plot index area at East Amatuli Island-Light Rock, no significant trends were detected in the other 1989-1994 East Amatuli Island-Light Rock and Nord Island population data sets. Productivity was high (0.7 fledglings per nest site) and within normal bounds, compared with other colonies. | Begun as R11; continued as 93022. Close-out/report writing under 95039. |
| 94041 | Introduced Predator Removal from Islands | DOI/ FWS | Annual report peer reviewed; available to public at OSPIC. | Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK.<br><br>Removed 33 arctic foxes from Simeonof Island (no more believed remaining); removed 3 arctic foxes from Chernabura Island (population appeared to be dying out naturally). Censused populations of black oystercatchers and pigeon guillemots on above islands as well as on nearby islands with no foxes (controls). No oystercatcher nests found on fox islands; densities of both oystercatchers and guillemots are much less on fox islands than on fox-free ones. Recovery of nesting populations of oystercatchers and guillemots is expected to begin in 1995 on Simeonof and Chernabura islands. | |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94043A1 | Eshamy River Restoration (W. PWS) | USFS | Project discontinued. | | |
| 94043A2 | Gumboot Creek Restoration (W. PWS) | USFS | No report required (NEPA only). | EA completed and decision notice signed July 27, 1995. | NOTE: Also known as Gunboat Creek. |
| 94043A3 | Stream No. 508 Restoration | USFS | Project discontinued. | | |
| 94043A4 | Stream No. 509 Restoration (W. PWS) | USFS | Project discontinued. | | |
| 94043A5 | Otter Creek/Lake Restoration (Knight I.) | USFS | No report required (NEPA only). | EA completed and decision notice signed June 28, 1995. | |

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|---|---|---|---|---|---|
| 94043A6 | Miners Creek/Lake Restoration (N. PWS) | USFS | Project discontinued. | | |
| 94043A7 | Shrode Creek/Lake Restoration (W. PWS) | USFS | No report required (NEPA only). | EA completed and decision notice signed June 28, 1995. | |
| 94043B1 | Sockeye Creek/Lake Restoration (Knight I.) | USFS | No report required (NEPA only). | EA finalized and signed. EA concluded that Sockeye Creek is not a cost effective site for this project at this time. | |
| 94043B2 | Rocky Creek/Bay Restoration (Montague) | USFS | Redraft of final report submitted to Chief Scientist April 30, 1996; under peer review. | | |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94064 | Harbor Seal Habitat Use and Monitoring | ADFG | Annual report (which includes results of 94320F) peer reviewed; available to public at OSPIC. NOTE: Project also includes report writing funds for 93046. | Frost, K., et al. 1995. Habitat use, behavior, and monitoring of harbor seals in PWS, AK. ADF&G.<br><br>Twenty-six seals caught and sampled September 1994 (blood, whiskers for stable isotopes, blubber for fatty acids, skin for genetics, measurements). Twelve of these instrumented with satellite-linked time-depth recorders (6 adults, 6 subadults). Aerial surveys conducted during molting period in September. Preliminary survey analysis suggests no marked increase or decrease since 1993. Eight SLTDRs functioning on 11/10/94. Most seals remain local in PWS; one subadult in Gulf of Alaska. | Started as MM5; continued as R73, 93046, and 95064. |
| 94066 | Harlequin Duck Recovery Monitoring | ADFG | Project is close-out/report writing for 93033. See 93033 for status. | See 93033. | Close-out/report writing for 93033. |
| 94086 | Herring Bay Experimental and Monitoring Studies | ADFG | Annual report peer reviewed; available to public at OSPIC. | Highsmith, R.C., et al. Herring Bay monitoring and restoration studies. UAF/ADF&G<br><br>Four field trips were conducted in 1994 for data and sample collections. Data was collected for population dynamics, barnacle recruitment, and water circulation studies. | Population dynamics portion of 93039. |
| 94090 | Mussel Bed Restoration and Monitoring | NOAA | Annual report peer reviewed; available to public at OSPIC. | Babcock, M.M., P.M. Harris, S.D. Rice, R.J. Bruyere, and D.R. Munson. 1995. Recovery monitoring and restoration of oiled mussel beds in Prince William Sound, AK. NOAA/NMFS, Juneau, AK<br><br>Twelve mussel beds were cleaned and restored in 1994. | CH1B and 93036. Continued as 95090. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94092 | Killer Whale Recovery Monitoring | NOAA | Project is close-out/report writing for 93042. See 93042 for status. | See 93042. | Continuation of 93042. |
| 94102 | Marbled Murrelet Prey and Foraging Habitat in Prince William Sound | DOI/FWS | Final report (funded under 95102) accepted by Chief Scientist. Not yet at OSPIC. | Kuletz, K.J., D.K. Marks, R. Burns, and L. Prestash. Marbled murrelet foraging patterns and habitat use during the breeding season in PWS.<br><br>Forty-seven murrelets were radio-tagged. Foraging ranges were obtained by tracking birds with boats and planes. Birds foraged up to 60 kms. from their nests (average 10 km.). The average distance from shore was 0.6 km. | R15, 93051, 95102 |
| 94110 | Habitat Protection - Data Acquisition and Support | ADNR | No report required. | See Habitat Protection Working Group, "Comprehensive Habitat Protection Process; Large Parcel Evaluation and Ranking" Volumes I and II (November 2, 1994 Supplement). | Close-out under 95110-CLO. |
| 94126 | Habitat Protection and Acquisition Fund | ADNR | No report required. | | 94110 |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94137 | Stock Identification of Chum, Sockeye, Chinook, and Coho in PWS | ADFG | Redraft of final report submitted to Chief Scientist August 14, 1996. (Report is funded under 95137 and incorporates results of 93068.) | Scanned approximately half a million sockeye salmon and 1/3 million chum salmon in PWS for tags. Results of sockeye tag recoveries were used to manage fisheries in western PWS. Interception of Coghill Lake-bound wild fish was kept to a minimum. | Evolved from FS03; continued as 93068 and 95137. |
| 94139A1 | Waterfall Creek Bypass Instream Restoration | ADFG | No report required (project carried forward as Project 95139A1). | | 94043, carried forward as 95139A1 |
| 94139A2 | Port Dick Spawning Channel | ADFG | No report required (project carried forward as 95139A2). | | |
| 94139B1 | Otter Creek Bypass Instream Restoration | USFS | Annual report peer reviewed; available to public at OSPIC. | Wedemeyer, K., et al. 1995. Instream habitat and stock restoration for salmon, Otter Creek barrier bypass subproject. USDA Forest Service, Chugach N.F., Anchorage, AK<br><br>Otter Creek bypass rehabilitation completed. | 95139B |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94139B2 | Shrode Creek Bypass Instream Restoration | USFS | Annual report peer reviewed; available to public at OSPIC. | Wedemeyer, K., et al. 1995. Stream habitat and stock restoration for salmon, Shrode Creek barrier bypass subproject. USDA Forest Service, Chugach N.F., Anchorage, AK<br><br>Shrode Creek bypass renovation completed. | 95139B |
| 94139C1 | Montague Island Chum Instream Restoration | USFS | Annual report peer reviewed; not yet at OSPIC. | Schmid, D., et al. 1995. Montague Island chum salmon restoration. USDA Forest Service, Chugach N.F., Cordova, AK<br><br>Project completed for three streams on Northern Montague Island. This project completed 32 structures and 15 acres of thinning. | 95139C1 |
| 94139C2 | Lowe River (6.5 Mile) Instream Restoration | ADFG | No report required (project carried forward as Project 95139C2). | | 95139C2 |
| 94159 | Marine Bird & Sea Otter Boat Surveys | DOI | Final report available to public at OSPIC. | Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of PWS, Alaska: Trends following the T/V *Exxon Valdez* oil spill.<br><br>Estimated 320,470 plus-or-minus 63,640 marine birds in PWS in March 1994. Goldeneye and merganser populations may still be showing effects from oil spill. They are both increasing faster in the unoiled area than in the oiled area. | Began as B2; continued as 93045. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94163 | Forage Fish Influence on Recovery of Injured Species | NOAA, ADFG | The results of this project will be presented in two reports:<br>(1) NOAA: Annual report peer reviewed; available to public at OSPIC.<br>(2) ADFG: Annual report peer reviewed; available to public at OSPIC. | (1) Tyler, A., et al. Forage fish study in PWS, AK. UAF/NMFS. Appendix by B. Ostrand, USFWS/DOI.<br>(2) Willette, M., et al. Forage fish influence on recovery of injured species: forage fish diet overlap.<br><br>NOAA:<br>August cruise: (a) Hydroacoustic data showed fish schools mainly in the more shallow water regions near the bottom; fish appeared absent from mid-water layers over the deep passages.<br>November cruise: (a)Temperature-depth profiles for open areas of PWS showed surfac temperature 7.0C, warming to 9.0C at 50m depth. Water cooled to 5.0C with further increase in depth. Salinity gradually increased through this depth range, indicating little mixing of the water column and that cooling was occurring from the surface downward due to cold air temperatures. Over the shallow shelf areas the profiles were different, being at 8.0C and mixed to 70m. (b) Five stations were sampled for invertebrate forage species, with euphausiids the abundant crustacean at most stations. (c) Hydroacoustic analysis showed fish mainly located above the temperature maximum at depths of 20 to 40 meters (net sampling showed these fish were young herring mixed with young pollock). Hydrograhpic data indicated fish aggregations were at temperatures of 7.0 to 7.5C. A second layer of fish was seen near the bottom (likely adult pollock).<br>ADFG: pproximately 1,500 stomach samples collected for analysis of diet overlap. Found Pacific herring, walleye pollock, and juvenile chum salmon common and widespread throughout western PWS. | Integrate with Projects 94320 (PWS System Investigation), 94102 (Murrelet Prey), and 94173 (Pigeon Guillemot). |
| 94165 | Herring Genetic Stock Identification in Prince William Sound | ADFG | Project deferred to FY 95 (95165). | | 95165 |

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|---|---|---|---|---|---|
| 94166 | Herring Spawn Deposition and Reproductive Impairment | ADFG, NOAA | The results of this project will be presented in two reports:<br>(1) ADFG annual report peer reviewed; available to public at OSPIC.<br>(2) NOAA annual report peer reviewed; available to public at OSPIC. | (1) Wilcock, J.A., E.D. Brown and E. Debevec. Herring spawn deposition and reproductive impairment.<br>(2) Carls, M.G., S.D. Rice, and R.E. Thomas. 1995. Impact of exposure of adult pre-spawn herring (*Clupea harengus pallasi*) on subsequent progeny. NOAA/NMFS, Juneau, AK.<br><br>Adult herring biaccumulated hydrocarbons, including ovarian tissue and ova. Adults were stressed by oil when VHS was present; VHS prevalence was correlated with PAH concentration. Eggs and larvae were not impacted by parental exposure to hydrocarbons. Factors unaffected included egg fertility, time of hatch, survival, larval stage at hatch, swimming ability, morphology, chromatid separation, and number of mitotic figures. | Coordinating with USFS regarding avian predation (94320Q). |
| 94173 | Pigeon Guillemot Recovery Monitoring | DOI/ FWS | Final report available to public at OSPIC. | Hayes, D. L. 1995. Recovery monitoring of pigeon guillemot populations in PWS, Alaska. USFWS, Anchorage, AK.<br><br>Found evidence of predation on eggs and chicks on Naked Island and abandonment of eggs on Jackpot Island. On Naked Island, gadids were much more prevalent and sandlance much less prevalent in the diet of chicks in 1994 than in 1979-81. Herring or smelt accounted for ca. 32% of prey items delivered to chicks at Jackpot Island, but only ca. 1% at Naked Island. | Continued from 93034. |
| 94184 | Coded Wire Tag Recoveries from Pink Salmon in PWS | ADFG | Project is close-out/report writing for 93067. See 93067 for status. | See 93067. | Began as FS3. Continued as R60A, 93067, and 94320B. |

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|---|---|---|---|---|---|
| 94185 | Coded Wire Tagging of Wild Pinks for Stock Identification | ADFG | Project discontinued. | | |
| 94191 | Oil Related Egg and Alevin Mortalities | ADFG, NOAA | The results of this project will be presented in two reports:<br>(1) ADFG annual report peer reviewed; PI revised and returned to Chief Scientist December 17, 1996.<br>(2) NOAA annual report peer reviewed; available to public at OSPIC.<br>(NOTE: Project also includes report writing funds for R60C and 93003.) | (1) Seeb, J.E., et al. Oil related egg and alevin mortalities. ADF&G<br>(2) Heintz, R.A., S.D. Rice, and J.W. Short. 1995. Injury to pink salmon eggs and pre-emergent fry incubated in oiled gravel (laboratory study). NOAA/NMFS, Juneau, AK<br><br>ADFG - Collected gametes from 8 controlled and 8 oiled streams. These eggs are now being incubated and will be analyzed in 1995.<br>NOAA - 1992 brood died from bacterial kidney disease. 1993 brood emerged from incubators by 5/15/94. 18,000 fish were coded wire tagged and released May 1994; 14,000 fish were retained for PIT tagging later in the summer. Dose-related differences in growth and size of 1992 brood year observed in October 1993 were not as apparent in April 1994. Embryo survival to the development of the eye and emergence from substrate were measured in 1993 brood year, and clear relationship was observed between dose and survival to both developmental stages. During emergence period, inspected over 50,000 newly emerged fry for visible lesions and observed a dose relationship with the proportion of fish displaying edema. | Began as FS02 and R060C; continued as 93003. |
| 94199 | Institute of Marine Science - Seward Improvements | ADFG | No report required. | Record of Decision signed by DOI, DOA (USFS), and NOAA October 31, 1994. Capital funding approved by Trustee Council November 2, 1994, subject to Executive Director's approval. | Continued as 95199-CLO. |

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|---|---|---|---|---|---|
| 94217 | Prince William Sound Area Recreation Implementation | USFS | Project is close-out/report writing for 93065. See 93065 for status. | See 93065. | Close-out of 93065. |
| 94244 | Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance | ADFG | Annual report peer reviewed; available to public at OSPIC. (NOTE: Report also contains results from 95244.) | Fall, J. 1995. Harbor seal (*Phoca vitulina*) and sea otter (*Enhydra lutrus*) cooperative subsistence harvest assistance. ADF&G<br><br>A harbor seal/sea otter restoration workshop took place in Anchorage December 2, 1994. It was attended by more than thirty people, including representatives from eight communities which use marine mammals for subsistence.A second workshop took place on March 2, 1995. | Continued as 95244. |
| 94246 | Sea Otter Recovery Monitoring | DOI | Project is close-out/report writing for 93043. See 93043 for status. | See 93043. | Close-out/report writing for 93043. |
| 94255 | Kenai River Sockeye Salmon Restoration | ADFG | The results of this project will be presented in two reports:<br>(1) Annual report peer reviewed; available to public at OSPIC.<br>(2) Results of genetics component of project contained in report being prepared under Project 93012. See 93012 for status. | (1) Tarbox, K.E., R.Z. Davis, L.K. Brannian, and S.M. Fried. 1995. Kenai River sockeye salmon restoration. ADF&G, Soldotna, AK.<br>(2) Seeb, J. See 93012. | Began as R53; continued as 93012 and 93015. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94258 | Sockeye Salmon Overescapement | ADFG | Annual report peer reviewed; available to public at OSPIC.<br>NOTE: Project also includes report writing funds for 93002. | Skilak weight of fall predictive on both escapements and fall fry abundance. 1994 fall fry had low abundance and weight. Lipid comparisons of similar length fall fry from Tustumena and Skilak indicated Skilak fall fry entered winter in poor condition in 1993. 1995 adult return needed to define magnitude and duration of reduced sockeye production. | Started as FS27; continued as 93002 and 95258. |
| 94259 | Coghill Lake Sockeye Salmon Restoration | ADFG | Annual report peer reviewed; available to public at OSPIC. | Edmundson, J.A., G.B. Kyle, and S.R. Carlson. 1995. Restoration of Coghill Lake sockeye salmon: 1994 annual report on nutrient enrichment restoration. ADF&G, Soldotna, AK.<br><br>Estimated 900,000-1,800,000 smolts outmigrated this year. Escapement approximately 7,200 adults. Response of phytoplankton to liquid fertilizer applications suggests fertilizer is not being lost to the anaerobic layer, but is actually improving the productivity of Coghill Lake. | Began as 93024. |
| 94266 | Shoreline Assessment and Oil Removal | ADEC, DOI/NBS | The results of this project will be presented in two reports:<br>(1) DOI/NBS: REPORT OVERDUE. Redraft of final report peer reviewed and returned to PI for revision June 18, 1996. Due date for submission of redraft extended to October 30, 1996; report not yet received.<br>(2) ADEC: Final report accepted by Chief Scientist; not yet at OSPIC. | (1) Irvine, G. NBS/DOI. Fate and persistence of oil stranded on Gulf of Alaska shorelines during EVOS.<br>(2) Munson, D. ADEC. Shoreline assessment and oil removal. | |

# *Exxon Valdez* Oil Spill Project Status Summary
## 1994 Work Plan
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94272 | Chenega Chinook Release Program | ADFG | Annual report peer reviewed; available to public at OSPIC. | 50,300 chinook smolts released at Crab Bay on 5/27/94. Chenega residents reared and fed smolts in net pens prior to release. | Continuation of 93016. |
| 94279 | Subsistence Food Safety Testing | ADFG | Final report peer reviewed and returned to PI for revision June 12, 1996. | Miraglia, R. Subsistence restoration project: food safety testing.<br>Test results on final fish and shellfish samples received from NMFS lab. All results so low as to be within margin of error for tests. Seal samples from Tatitlek and duck samples from Chenega Bay were collected by ADFG with assistance from local subsistence hunters. Test results found hydrocarbon contamination was at background levels. | Continuation of 93017. |
| 94285 | Subtidal Sediment Recovery Monitoring | NOAA | Annual report peer reviewed; available to public at OSPIC. (NOTE: Project also includes report writing funds for 93047.) | O'Clair, C.E., J.W. Short, and S.D. Rice. 1995. Subtidal monitoring: recovery of sediments in the Northwestern Gulf of Alaska. NOAA/NMFS, Juneau, AK. | Continuation of ST2A and 93047. Continued as 95106. |
| 94290 | Hydrocarbon Data Analysis and Interpretation | NOAA | No report required. | In FY94, 2,742 samples were received and several hundred were submitted for analysis. | Continuation of ST8 and 93053. Continued as 95290. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94320A | Salmon Growth and Mortality | ADFG | Consolidated annual report peer reviewed; available to public at OSPIC. | Growth rate of juvenile pink salmon in 1994 in PWS slightly above average compared to 1989-1993 period. | |
| 94320B | Coded Wire Tagging Recovery-PWS Pinks | ADFG | Annual report peer reviewed; available to public at OSPIC. | Sharr, S., et al. 1994. Coded wire tag recoveries from pink salmon in PWS salmon fisheries. ADF&G.<br><br>Common property fisheries: 26.2 million caught, 4.4 million scanned (17%), 3,600-4,000 tags recovered. Hatchery revenue sales: 10.4 million caught, 2 million scanned (19%), 1,600 tags recovered. Scanned close to 100% of brood stock from PWS salmon hatcheries. Used results of in-season analysis, based on detection of tags, for critical management decisions regarding fishing areas and times. Ability to detect wild stock shortfalls and high abundance of hatchery fish contributed to meeting restoration goals. | Continued as 96186. |
| 94320C | Otolith Mass Marking of PWS Pink Salmon | ADFG | Annual report peer reviewed; available to public at OSPIC. | Feasibility study initiated at PWSAC Cannery Creek Hatchery. Approximately 50,000 fry were immersed for different lengths of time and at different temperatures to determine optimum treatment for marking effectiveness and survival. Completed examination of otoliths subjected to varying levels of oxytetracycline and varying temperatures at ADFG lab. Marking was not successful for any of the treatment groups. | Continued as 96188. |

# *Exxon Valdez* Oil Spill Project Status Summary
## 1994 Work Plan
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94320D | Pink Salmon Genetics | ADFG | Results of this project are included in report being prepared under Project 95320D. See 95320D for status. | In ADFG lab, DNA data show upstream and intertidal spawners in the same stream genetically differ. Have also found that mainland and island populations genetically differ. | 94184, 94191 |
| 94320E | Salmon Predation | ADFG | See 94320A. | Walleye pollock, adult pink salmon, Pacific herring, and dolly varden trout identified as important predators on juvenile salmon in Prince William Sound. | |
| 94320F | Harbor Seals-Trophic Interactions | ADFG | Data/findings integrated into report prepared on 94064. See 94064 for status. | See 94064. Preliminary fatty acid analysis of blubber samples indicates several distinct feeding patterns. Some seals appear to eat plankton-eating fishes and others piscivorous fishes/prey such as pollock and squid. Stable isotope analysis indicates different feeding patterns for subadults and most adults. Adult females in particular show a strong annual shift in prey. | 94064. Combined with 95064 for 1995. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94320G | Phytoplankton and Nutrients | ADFG | See 94320A. | | |
| 94320H | Role of Zooplankton in PWS Ecosystem | ADFG | See 94320A. | Time series of zooplankton biomass tracks predation on 0-class fish in April, May, and June. | 95320H |
| 94320I | Food Web Dependencies in PWS Ecosystem/Stable Isotopes | ADFG | See 94320A. | Food Web of Fishes- Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations).<br>Marine Mammal Trophic Energetics- Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker. | |
| 94320J | Information Systems and Model Development | ADFG | See 94320A. | | |

## *Exxon Valdez* Oil Spill Project Status Summary
## 1994 Work Plan
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94320K | PWSAC-Experimental Fry Release | ADFG | See 94320A. | Adult pink salmon will return in summer 1995 as a result of 1994 fry release. Marine survivals will be estimated based on coded wire tag data. Rearing and release strategies will be compared and differences in marine survival evaluated between rearing and release groups. | |
| 94320L | PWSAC-Experimental Manipulation | ADFG | Final report available to public at OSPIC. | | |
| 94320M | Physical Oceanography in PWS and Gulf of Alaska | ADFG | See 94320A. | | |
| 94320N | Nearshore Fish | ADFG | See 94320A. | | |
| 94320P | SEA Program: Program Management | ADFG | See 94320A. | | All subprojects of 94320. |

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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94320Q | Avian Predation on Herring Swan | USFS | See 94320A. | Bishop, M.A. 1995. Avian predation on herring spawn. Copper River Delta Institute, USDA Forest Service, Cordova, AK | 95320Q |
| 94320S | Disease Impacts on Herring | ADFG | Annual report peer reviewed; available to public at OSPIC. | *Icthyophonus hoferi,* viral hemorrhagic septicemia virus, and other causes of morbidity in Pacific herring spawning in PWS in 1994. ADF&G.<br><br>Because of the important of *Icthyphonus* in herring morbidity in 1994, all previous Pacific herring sampled from PWS and submitted to UC Davis (1989, 1990, 1991, 1992) were re-screened for *Icthyophonus*. Prevalence in these samples was never more than 15% and was distributed fairly evenly among liver, kidney, and spleen, but was never in the olfactory nares. | |
| 94417 | Waste Oil Disposal Facilities | ADEC | No report required (project carried forward as 95417). | | 95417 |
| 94422 | Environmental Impact Statement for the Draft Restoration Plan | USFS | No report required. | Final EIS released September 30, 1994. Notice of Availability in Federal Register, Vol. 59, No. 186, p. 49232, dated 9/27/94 and Vol. 59, No. 189, p. 49926, dated 9/30/94. Record of Decision (ROD) signed October 31, 1994. Copies of FEIS available through OSPIC. | Continued as 95422. |

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94423 | Oil Spill Public Information Center (OSPIC) | ALL | No report required. | During the quarter ending 12/31/96, OSPIC staff received 323 visitors, responded to 667 requests for information (of which 149 were sent via e-mail from the Web Home Page), processed 40 interlibrary loans, loaned 258 items, distributed 1,038 documents, and acquired 2 books and 1 report. 578 documents were added to the Trustee Council Administrative Record and 2 Marine Ecosystem posters were sold. OSPIC staff received 3 NRDA/Restoration Project final reports for format review, approved 1, and distributed final copies of 7. OSPIC staff received 4 annual reports for format review, approved 4, and received final copies of 5. From 10/1/96 through 12/31/96, 5,488 people used the OSPIC World Wide Web Home Page. | |
| 94424 | Restoration Reserve | ALL | No report required. | The Restoration Reserve was formally established by the Court Registry Investment System on February 15, 1996. The reserve consists of securities structured to mature annually on November 15 beginning in 1997 and ending in the year 2002. To date, a total of $36 million has been placed in the Reserve. The Trustee Council approved the transfer of another $12 million on August 29, 1996. Pursuant to the approval motion, the transfer will be made at such time as the Executive Director determines that funds are availabe. | |

# *Exxon Valdez* Oil Spill Project Status Summary
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| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94425 | Marine Mammal Book | NOAA | No report required. | See Marine mammals and the *Exxon Valdez*. Loughlin, T.R., editor. 1994. Academic Press, Inc. 395 pages.<br><br>Book printed and for sale by Academic Press. | |
| 94427 | Experimental Harlequin Duck Breeding Survey | ADFG | Annual report peer reviewed; available to public at OSPIC. | Rosenberg, D.H. 1995. Experimental harlequin duck breeding survey in Prince William Sound, AK. ADF&G, Anchorage, AK. | B11, R71, 93033, 94066, 95427, and nearshore ecosystem projects. |
| 94428 | Subsistence Restoration Planning and Implementation | ADFG | Final report (which also includes results from 95428) available to public at OSPIC. | Fall, J. ADF&G. Subsistence restoration planning and implementation. | |
| 94504 | Genetic Stock Identification of Kenai River Sockeye | ADFG | Project is close-out/report writing for 93012. See 93012 for status. | See 93012. | Close-out/report writing for 93012. |
| 94505 | Information Needs for Habitat Protection | USFS | Findings included in report prepared under 95505B. See 95505B for status. | See 95505B. | Close-out of 93051. 95505B. |

# *Exxon Valdez* Oil Spill Project Status Summary
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## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 94506 | Pigeon Guillemot Recovery | DOI | Project is close-out/report writing for 93034. See 93034 for status. | See 93034. | Report writing for 93034. |
| 94507 | Symposium Proceedings Publication | NOAA | The 926-page EVOS Symposium Proceeding is published with distribution beginning September 1996. The publisher, American Fisheries Society (AFS), will maintain sales records which will be supplied to the PI. | Rice, S.D., R.B. Spies, D.A. Wolfe, and B. A. Wright, editors. 1996. Proceedings of the *Exxon Valdez* oil spill symposium. American Fisheries Society Symposium 18, Bethesda, Maryland.<br><br>Proceedings include 61 manuscripts in the following topic areas: fate and toxicity (8 manuscripts), intertidal (10 manuscripts), treatment effects (5), subtidal (3), herring (2), salmon (12), othe fish (5), birds (8), mammals (2), archaeology (1), subsistence (4), human impacts (2).<br>NOTE: In FY 96, the Trustee Council approved an additional $42,000 for the completion of the proceedings (Project 96507). | Continued as 96507. |

# *Exxon Valdez* Oil Spill Project Status Summary
## 1995 Work Plan
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95001 | Condition and Health of Harbor Seals | ADFG Castellini, UAF | Annual report submitted to Chief Scientist April 11, 1996; under peer review. | Castellini, J.M., N.J. Meiselman, and M.A. Castellini. Understanding and interpreting hematocrit measurements in pinnipeds. Marine Mammal Science 12(2):251-264. Hematocrit measurements of pinnipeds were 4-15% higher when utilizing clinical Coulter counter methods as opposed to the more direct method of microcentrifugation. Manual restraint of animals, isoflourane anesthesia, and developmental states also affected hematocrit measurements in pinnipeds. Thus, modeling efforts that require representative hematocrit values can be markedly impacted by variations in hematocrit measurement techniques and sampling regimens. | 96001 |
| 95007A | Archaeological Site Restoration - Index Site Monitoring | ADNR Reger | Annual report peer reviewed; available to public at OSPIC. | | |
| 95007B | Archaeological Site Restoration | USFS Yarborough | Partial draft of final report peer reviewed and returned to PI for revision December 20, 1996. Complete draft due to Chief Scientist by February 28, 1997. [Note: An FY 95 annual report was also submitted under this project number. It is available to the public at OSPIC, but has not been peer reviewed. The annual report was not required under Trustee Council report writing procedures.] | | Report writing funded under 96007B. |
| 95009D | Survey of Octopus and Chiton in Intertidal Habitats | USFS Scheel, PWSSC | Annual report peer reviewed; available to public at OSPIC. | Scheel, D., et al. 1996. Survey of octopus in the intertidal in PWS, AK. PWSSC, Cordova, AK | 96009D |
| 95012 | Comprehensive Killer Whale Investigation | NOAA Matkin | Annual report peer reviewed; available to public at OSPIC. | | 96012A |

# *Exxon Valdez* Oil Spill Project Status Summary
## 199[illegible]k Plan
## Quarter Ending December 31, 1996

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95021 | Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands | DOI (NBS) Hatch | Final report available to public at OSPIC. | | |
| 95025 | Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators | DOI Holland-Bartels | Annual report peer reviewed; available to public at OSPIC. | | 96025 |
| 95025A | Nearshore Package: Project Planning and Development | DOI (NBS) Holland-Bartels | No report required. | | 96025 |
| 95026 | Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data | ADEC Braddock | Final report being completed under Project 97026. See 97026 for status. | | |
| 95027 | Kodiak Shoreline Assessment: Monitoring Surface and Subsurface Oil | ADEC Piper | Final report accepted by Chief Scientist; not yet at OSPIC. | E. Piper. 1995 Kodiak Shoreline Oiling Assessment of EVOS. | |
| 95029 | Population Survey of Bald Eagles in PWS | DOI (FWS) Schempf | Final report peer reviewed and returned to PI for revision April 8, 1996. | Bowman, T., Schempf, P., Hodges, J. 1996. Bald eagle populations in PWS, Alaska after the *Exxon Valdez* oil spill. USFWS/DOI Surveys indicated increase in population size and apparent recovery from spill. | |
| 95031 | Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS | DOI (FWS) Kuletz | Draft final report peer reviewed and returned to PI for revision October 26, 1996. | Kuletz, K.J., Kendell, S. developing a productivity index for marbled murrelets. USFWS/DOI Six sites in PWS were surveyed repeatedly by boat, June-August (n=65 surveys). Adult and juvenile seasonal patterns were described. Juvenile ratios and densities were significantly different between some sites. June adult numbers were most strongly correlated with juvenile numbers in July/August. An optional survey period was identified and power analysis defined necessary sample sizes. | 94102; final report funded under 96031. |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95038 | Symposium on Seabird Restoration | DOI (FWS) Harrison, PSG | REPORT OVERDUE. Final report, in addition to publication of workshop proceedings, was to be submitted to Chief Scientist November 1996 -- not received. | Workshop took place September 29-October 2 in Girdwood, AK. Roughly 47 participants from Great Britain, Belgium, France, New Zealand, Japan, Canada, and USA. Primary focus was on common murre, harlequin duck, marbled murrelet, and pigeon guillemot. Achieved workshop goal by discussing seabird restoration in general, then applying the general discussions and conclusions to EVOS. | |
| 95039 | Common Murre Productivity Monitoring | DOI (FWS) Roseneau | Project is close-out/report writing for 94039. See 94039 for status. | | 94039 |
| 95041 | Introduced Predator Removal from Islands - Follow-up Surveys | DOI (FWS) Bailey | Final report accepted by Chief Scientist; not yet at OSPIC. | Byrd, G.V., E.P. Bailey, and W. Stahl. 1996. Introduced predator removal from islands. USFWS/DOI. Homer, AK | |
| 95043B | Carry-forward: Cutthroat and Dolly Varden Rehabilitation in Western PWS | USFS Wedemeyer | Annual report peer reviewed; not yet at OSPIC. | | 96043B |
| 95052 | Community Interaction/Use of Traditional Knowledge | ADFG Miraglia | Final report submitted to Chief Scientist May 1, 1996; under peer review. | | 96052 |
| 95058 | Landowner Assistance Program | ADFG Kuwada | No report required. | | |
| 95060 | Spruce Bark Beetle Impacts | ADEC Piper | Draft final report submitted to Chief Scientist October 31, 1996; under peer review. | | |
| 95064 | Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS | ADFG Frost | Annual report peer reviewed; undergoing format review at OSPIC. | Population model for harbor seals. Intitial results of fatty acid analysis indicate this technique has great use for distinguishing differences in seal diets. | 96064 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95074 | Herring Reproductive Impairment | NOAA Carls | Draft final report (which will include five chapters submitted as manuscripts) peer reviewed and returned to PI for revision, December 11, 1996. | Carls, M.G., et al. Disease, mortality, and bioaccumulations of hydrocarbons in pre-spawn herring. Carls, M.G., et al. Impact of exposure of adult pre-spawn herring to weathered crude oil on subsequent progeny. Thomas, R.E., et al. Mixed function oxidase induction in pre- and post-spawn herring by petroleum hydrocarbons. Carls, M.G., et al. Effects of incubating herring eggs in water contaminated with weathered crude oil Johnson, S.W., et al. Reproductive success of Pacific herring in PWS six years after EVOS. | Final report funded under 96074. |
| 95076 | Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon | NOAA Wertheimer | Annual report (which includes results of Project 95191B) peer reviewed; available to public at OSPIC. | Wertheimer, A. C., et al. 1996. Effects of oiled incubation substrate on straying and survival of wild pink salmon. Auke Bay Fisheries Lab, NMFS, NOAA. Juneau, AK. | 96076 |
| 95086C | Herring Bay Monitoring and Restoration Studies | ADFG Highsmith, UAF | Draft final report (which includes results of 93039) peer reviewed; returned to PI for revision December 12, 1996. | | Final report writing funded under 96086. |
| 95089 | Information Management System | ALL Fries | No report required. | | |
| 95090 | Mussel Bed Restoration and Monitoring in PWS and Gulf of Alaska | NOAA Babcock | FINAL REPORT OVERDUE; now expected March 1997. | Babcock, M. and G. Irvine. | Final report funded under 96090. |
| 95093 | PWSAC: Restoration of Pink Salmon Resources and Services | ADFG Ferren, PWSAC | Project terminated; no report required. | | |
| 95100 | Administration, Science Management and Public Information | All | No report required. | | |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95102-CLO | Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound | DOI (FWS) Kuletz | Project is close-out/report writing for 94102. See 94102 for status. | Kuletz, K.J., et al. 1995. Marbled murrelet foraging patterns in PWS, Alaska. | 94102 |
| 95106 | Subtidal Monitoring: Eelgrass Communities | ADFG Jewett, UAF | Draft final report peer reviewed; returned to PI for revision December 16, 1996. | | Final report writing funded under 96106. |
| 95110-CLO | Closeout: Habitat Protection and Acquisition | ADNR Fries | No report required. | | |
| 95115 | Sound Waste Management Plan | ADEC PWSEDC | Final report available to public at OSPIC. | | |
| 95117-BAA | Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation | NOAA Castellini, UAF | Draft annual report submitted to Chief Scientist September 15, 1996; under peer review. | | Continued under 96001. |
| 95121 | Fatty Acid Signatures of Selected Forage Fish Species in PWS | NOAA Worthy, Texas A&M University | Draft report not yet submitted to Chief Scientist. (The draft submitted to NOAA on January 23, 1997 was deemed incomplete and so is being reworked.) | | |
| 95126 | Habitat Protection and Acquisition Support | ADNR Fries | No report required. | | |
| 95126A | Carry-forward: Habitat Protection and Acquisition Support | ADNR Fries | No report required. | | |
| 95127 | Tatitlek Coho Salmon Release Program | ADFG Kompkoff, Tatitlek IRA | No report required (project was NEPA only). | | 96127 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95131 | Clam Restoration (Nanwalek, Port Graham, Tatitlek) | ADFG Brown-Schwalenberg, CRRC | Annual report peer reviewed July 1, 1996; not yet at OSPIC. | | 96131 |
| 95137-CLO | Closeout: Prince William Sound Salmon Stock Identification and Monitoring Studies | ADFG Fried | Project is close-out/report writing for 93068 and 94137. See 94137 for status. | | 93068, 94137 |
| 95138 | Elders/Youth Conference | ADFG Simeone | Conference proceedings available to public at OSPIC. | Braund, S., et al. Community conference on subsistence and the oil spill: summary report. Oct. 1995. | |
| 95139 | Wild Stock Supplementation Workshop | ADFG Hauser | No report required. (Summation memo prepared by Chief Scientist is on file in Anchorage Restoration Office.) | | |
| 95139A1 | Carry-forward: Salmon Instream Habitat and Stock Restoration -- Little Waterfall Creek Barrier Bypass | ADFG Honnold | Annual report submitted to Chief Scientist June 13, 1996; under peer review. | Construction complete in field November 1995. | 96139A1 |
| 95139A2 | Port Dick Spawning Channel | ADFG Dudiak | No report required (project was NEPA only). | | |
| 95139B | Closeout: Otter Creek/Shrode Creek Instream Restoration | USFS Olson | Project is close-out/report writing for 94139B1 and 94139B2. See 94139B1 and 94139B2 for status. | | 94139B1, 94139B2 |
| 95139C1 | Montague Riparian Rehabilitation | USFS Hodges | Annual report peer reviewed; not yet at OSPIC. | | 96139C1 |
| 95139C2 | Carry-forward: Salmon Instream Habitat and Stock Restoration -- Lowe River | ADFG | No report required (project canceled). | | |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95163A | Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (interim funding) | NOAA Duffy (NOAA), Willette (ADFG) | NOAA: No report required. Project is funding for planning of integrated APEX/ ecosystem project. ADFG: Project is funding for close-out/report writing for 94163; see 94163 for status of annual report. | | |
| 95163A1 | Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (APEX) | NOAA Haldorson | Integrated annual report submitted to Chief Scientist June 15, 1996; under peer review. Available to public at OSPIC. | | 96163 |
| 95163B | Foraging of Seabirds (APEX) | DOI Ostrand | See 95163A1. | | 96163 |
| 95163C | Fish Stomach Contents Analysis (APEX) | NOAA Sturdevant | See 95163A1. | | 96163 |
| 95163D | Tufted Puffin Foraging and Reproductive Success (APEX) | DOI Piatt | Draft final report submitted to Chief Scientist January 29, 1997; under peer review. NOTE: Report was to be a chapter of the 95163 integrated report (see 95163A1), but it was not submitted at the time of the integrated report. This is a final report because this component of APEX did not continue past FY 95. | | See 96163. |
| 95163E | Reproduction and Foraging of Black-legged Kittiwakes (APEX) | DOI (FWS) Irons | See 95163A1. | | 96163 |
| 95163F | Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding) | DOI (FWS) Hayes | Project is close-out/report writing for 94173. See 94173 for status. | | 94173 |
| 95163F1 | Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX) | DOI Hayes | See 95163A1. | | 96163 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95163G | Seabird Energetics (APEX) | NOAA<br>Roby | See 95163A1. | | 96163 |
| 95163I | Seabird/Forage Fish Interaction: Program Management and Integration | DOI (FWS)<br>Duffy | See 95163A1. | | 96163 |
| 95163J | Barren Islands Seabird Studies (APEX) | DOI<br>Roseneau | See 95163A1. | | 96163 |
| 95163K | Using Predatory Fish to Sample Forage Fish (APEX) | DOI<br>Roseneau | See 95163A1. | | 96163 |
| 95163L | Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/ Distribution of Forage Fish in Barren Islands (APEX) | DOI<br>Piatt | See 95163A1. | | 96163 |
| 95165 | PWS Herring Genetic Stock Identification | ADFG<br>J. Seeb | Annual report peer reviewed; available to public at OSPIC. | | 96165 |
| 95166 | Herring Natal Habitats | ADFG<br>Carpenter, Willette | Annual report peer reviewed June 10, 1996; returned to PI for revision. | Results indicate an improvement in the age structure among the age 3 and 4 herring to suggest the beginnings of recovery. Results are being compared with results of the herring disease study. | 96166 |
| 95191A | Investigating and Monitoring Oil Related Egg and Alevin Mortalities | ADFG<br>J. Seeb, Bue | Results will be presented in two reports:<br>(1) Field component: Annual report peer reviewed; available to public at OSPIC.<br>(2) Genetics component: Annual report (in form of manuscript) submitted to Chief Scientist October 3, 1996; under peer review. | (1) Bue, B. Injury to pink salmon embryos in Prince William Sound: field monitoring<br>(2) Seeb, J. Laboratory examination of oil-related embryo mortalities that persist in pink salmon populations in Prince William | 96191A |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95191B | Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study) | NOAA Rice | Results of this project are included in the report being prepared under 95076. See 95076 for status. | | 96191B |
| 95199-CLO | Institute of Marine Science - Seward Improvements EIS | ADFG Sundberg | No report required. | Phase I (marine) construction completed. Phase II (building) construction bidding process underway. Private financing package assembled. Awaiting bid results and bond sale to proceed to construction, scheduled for May 8, 1996. | |
| 95244 | Seal and Sea Otter Cooperative Subsistence Harvest Assistance | ADFG Fall | FY 95 findings included in annual report submitted under 94244. See 94244 for status. | | 94244, 96244 |
| 95255 | Kenai River Sockeye Restoration | ADFG L. Seeb, Tarbox | Annual report submitted to Chief Scientist June 14, 1996; under peer review. | Analysis of allozyme and mtDNA data revealed a substantial amount of genetic diversity among populations, suggesting significant local adaptation. Simulations indicated that Kenai River poulations can be identified in mixtures. Results are currently being used in management. | 96255 |
| 95258 | Sockeye Salmon Overescapement (Kenai/ Kodiak) | ADFG Schmidt | Annual report submitted to Chief Scientist May 13, 1996; under peer review. | Developed model which predicts fall fry production from seasonal copepod abundance. Established a single year shift in density-dependent response because of two-year life history of dominant copepod. | 96258 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95259 | Restoration of Coghill Lake Sockeye | ADFG Kyle | Revised draft of annual report submitted to Chief Scientist December 11, 1996. | Nutrient enrichment of Coghill Lake shows positive effects on lake productivity. Mean total phosphorus concentration increased by 22% after enrichment; mean chlorophyll concentration (algal biomass) increased by 250%, which improved quality of phytoplankton. Rearing sockeye fry were larger in 1995 compared to previous years. The 1995 smolt outmigration estimate of 1.6 million was the highest recorded since sampling began in 1989. | 96259 |
| 95266 | Experimental Shoreline Oil Removal | ADEC Piper | Final report accepted by Chief Scientist. Approved by OSPIC; copies being made. | | |
| 95272 | Chenega Chinook Release Program | ADFG Lindley, PWSAC | Annual report peer reviewed; available to public at OSPIC. | | 96272 |
| 95279 | Subsistence Restoration Project - Food Safety Testing | ADFG Miraglia | Draft final report peer reviewed; returned to PI for revision November 19, 1996. | The emphasis in 1995 was to establish a system whereby subsistence users could get samples of abnormal resources to biologists and pathologists for study, who would then report findings back to subsistence users. Training sessions were held in 19 spill-impacted communities. | |
| 95285-CLO | Closeout: Subtidal Sediment Recovery Monitoring | NOAA O'Clair | Final report submitted to Chief Scientist May 9, 1996; under peer review. | | 94285 |
| 95290 | Hydrocarbon Data Analysis, Interpretation, and Database Maintenance for Restoration and NRDA Environmental Samples Associated with the *Exxon Valdez* Oil Spill | NOAA Short | Results incorporated into report being prepared under ST8. See ST8 for status. | | 96290 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95320A | Salmon Growth and Mortality | ADFG<br>Willette | Annual report, which integrates results of subprojects A, E, G, H, I(2), J, K, M, N, Q, T, U, and Y submitted to Chief Scientist May 20, 1996; under peer review. NOTE: Separate reports, in addition to the integrated report, were submitted for subprojects A, K, and Q. | Results indicate that predation on juvenile pink salmon by pollack and seabirds is less than had been forecast. This suggests predators may have caused significant mortality to juvenile pinks in nearshore habitats or that the pollack predation rate was underestimated if the feeding behavior or distribution of pollack was different than expected. | Integrated into 96320E in FY 96. |
| 95320B | PWS Pink Salmon Stock Identification and Monitoring (CWT) | ADFG<br>Joyce | Annual report peer reviewed; available to public at OSPIC. | Stock separation was complicated by non-standard marking rates for SEA project releases at AFK and WHN hatcheries. Also high tag loss rate at Cannery Creek hatchery biased results. In-season adjustments were made to compensate for the above mentioned biases. Solomon Gulch, Cannery Creek, wild stocks, WHN, and AFK hatcheries were the highest contributors to the PWS pink salmon return respectively. | 96186 |
| 95320C | Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS | ADFG<br>Joyce | Annual report peer reviewed; available to public at OSPIC. | Otolith thermal marks were applied on 100% of hatchery incubated pink salmon. The marks are distinct and blind tests have indicated that otolith lab personnel can identify hatchery fish from mixtures of hatchery and wild stocks. Preliminary results indicate a successful marking project. | 96188 |
| 95320D | PWS Pink Salmon Genetics | ADFG<br>J. & L. Seeb | Annual report peer reviewed; returned to PI for revision July 1, 1996. [NOTE: Report also includes results from 94320D.] | Allozyme and mtDNA analyses showed genetic differences between upstream and tidal collections within the same streams and among regions within PWS. These results support managing and restoring pink salmon on a regional basis rather than as a single panmictic population. | 96196 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95320E | Juvenile Salmon and Herring Integration | ADFG Willette | See 95320A. | Movement and diet overlap for age zero pink salmon have been studied and compared. | 96320 |
| 95320G | Phytoplankton and Nutrients | ADFG McRoy & Eslinger, UAF | See 95320A. | First complete data sets for the phytoplankton and nutrient cycles. | 96320 |
| 95320H | Role of Zooplankton in the PWS Ecosystem | ADFG Cooney, UAF | See 95320A. | | 96320 |
| 95320I | Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds) | ADFG Schell | Annual report peer reviewed; available to public at OSPIC. | Schell, D.M. and A. Hirons. 1996. Isotope ratio studies of marine mammals in PWS. ADF&G, Habitat and Restoration Division, Anchorage, AK. Stable isotope analyses were conducted on a wide suite of samples for this project and associated SEA isotope studies. Preliminary data show geographic gradients in isotope ratios useful in separating Gulf of Alaska from PWS energy sources. These are now being used as biological markers for fishery studies and for estimation of harbor seal feeding habitats. | Continued as 96170. |
| 95320I(2) | Isotope Tracers - Food Webs of Fish | ADFG Kline, UAF | See 95320A. | | |
| 95320J | Information Systems and Model Development | ADFG Patrick, PWSSC | See 95320A. | | 96320 |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95320K | PWSAC: Experimental Fry Release | ADFG Ferren & Lindley, PWSAC | Annual report submitted to Chief Scientist March 20, 1996; under peer review. Available to public at OSPIC. | The fish were successfully released on schedule. | 96320 |
| 95320M | Observational Physical Oceanography in PWS and the Gulf of Alaska | ADFG Vaughan, PWSSC | See 95320A. | | 96320 |
| 95320N | Nearshore Fish | ADFG Thomas, PWSSC | See 95320A. | Fish are typically light sensitive because of visibility by potential predators. In summer 1995 we noticed a trend in which pollock migrated downward with sunlight, and in fall 1995 we noticed a trend in which herring migrated towards the shore with both sunlight and moonlight. For better acoustic measurement of fish, one should perform herring surveys at night and during a new moon because they will more likely be in the open water, but perform pollock surveys in the day because they are farther from the surface. | 96320 |
| 95320Q | Avian Predation on Herring Spawn | USFS Bishop | Draft final report submitted to Chief Scientist December 4, 1996. [NOTE: Some results also included in integrated SEA report.] | Documented avian abundance and distribution in spawn areas. Glaucous- winged gulls were the most numerous herring spawn predator. Analyzed stomach contents of the five most abundant avian species foraging in spawn areas in northern Montague Island. Herring spawn occurred in 100% of glaucous-winged gulls, mew gulls, and surf scoters, and in 75% of surfbirds and 69% of turnstones. Estimate that glaucous- winged gulls, mew gulls, surf scoters, and black turnstones obtained 99- 100% of total daily energy from spawn. | 96320Q |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95320S | Disease Impacts on PWS Herring Populations (competitive solicitation under State of Alaska two-step, RFQ-RFP process) | ADFG Hauser | Annual report submitted to Chief Scientist April 5, 1996; under peer review. [NOTE: Report addendum on plasm lgm submitted May 3, 1996.] | Focal skin reddening or ulcers were more prevalent in spawning Pacific herring from PWS (2.8%) than from Sitka Sound (1.3%), but less prevalent at both sites than in PWS in 1994 (8.4%). Ichthyophonus prevalence in PWS spawning fish in 1995 (29%) was same as 1994 and same as Sitka Sound in 1995 (26%). VHS virus was not isolated from any spawning fish in PWS or Sitka Sound, but was isolated from 6.2% of prspawning fish from PWS. Lab experiments revealed that both VHS and Ichthyophonus can kill Pacific herring. | 96162 |
| 95320T | Juvenile Herring Growth and Habitat Partitioning | ADFG Norcross | See 95320A. | | 96320 |
| 95320U | Somatic and Spawning Energetics of Herring/Pollock | ADFG Paul, UAF | See 95320A. | | 96320 |
| 95320Y | Variation in Local Predation Rates on Hatchery-Released Fry | ADFG Scheel, PWSSC | See 95320A. [NOTE: This component of SEA was funded for close-out/report writing only in FY 96.] | Estimate that from 1.1-2.4% of the 241.7 million pink and chum salmon fry released into Lake Bay (Esther Island, PWS) in 1995 were consumed by seabirds in and near Lake and Quilliam Bays in the period April-June 1995. Black-legged kittiwakes and marbled murrelets were the most abundant avian predators on these fry. | 96320 |
| 95417 | Carry-forward: Waste Oil Disposal Facilities | ADEC | No report required (project canceled). | | |
| 95422-CLO | Closeout: Restoration Plan EIS/Record of Decision | USFS | No report required. | | |

| Project No. | Project Title | Lead Agency/ P.I. | ReportStatus | References and Results | RelatedProjects |
|---|---|---|---|---|---|
| 95424 | Restoration Reserve | All<br>All | No report required. | | |
| 95427 | Harlequin Duck Recovery Monitoring | ADFG<br>Rosenberg | Annual report accepted by Chief Scientist; undergoing format review at OSPIC. | Males comprised a significantly greater proportion of the total population in western PWS during the first spring survey. Compared to eastern PWS, in western PWS the ratio of paired to non-paired females was significantly lower, males comprised a significantly greater proportion of the total population during the fall, a greater proportion of flightless females was observed in late July, and the influx of females was delayed. The influx of males was accelerated in eastern PWS. No broods were observed in PWS. | 96427 |
| 95428-CLO | Closeout: Subsistence Planning Project | ADFG<br>Fall | FY 95 findings included in annual report submitted under 94428. See 94428 for status. | | 94428 |
| 95505B | Data Analysis for Stream Habitat | USFS<br>Olson | Final report available to public at OSPIC. Report also includes findings from 93051 and 94505. | Olson, R.A., 1995. Use of aerial photograph, channel-type interpretations to predict habitat availability in small streams, USDA, Forest Service, Chugach N.F., Anchorage, AK | 93051, 94505 |

# *Exxon Valdez* Oil Spill Project Status Summary
## 1996 Work Plan
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| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96001 | Recovery of Harbor Seals from EVOS: Condition and Health Status | ADFG | Annual report being drafted. | | |
| 96007A | Archaeological Index Site Monitoring | ADNR | Annual report being drafted. | | |
| 96007B | Site Specific Archaeological Restoration | USFS | Project is report-writing funds only for 95007B. See 95007B for status. | | |
| 96009D | Survey of Octopuses in Intertidal Habitats | USFS | Final report being drafted (report writing funded under 97009D). | | |
| 96012A-BAA | Comprehensive Killer Whale Investigation in Prince William Sound, Alaska | NOAA | Annual report being drafted. | | |
| 96025 | Mechanism of Impact and Potential Recovery of Nearshore Vertebrate Predators | DOI | Annual report being drafted. | | |
| 96027 | Kodiak Archipelago Shoreline Assessment: Monitoring Surface and Subsurface Oil | ADEC | Project is report-writing funds only for 95027. See 95027 for status. | | |
| 96031 | Development of a Productivity Index to Monitor the Reproductive Success of Marbled and Kittlitz's Murrelets in Prince William Sound, Alaska | DOI | Project is report-writing funds only for 95031. See 95031 for status. | | |
| 96038 | Publication of Seabird Restoration Workshop | DOI | Project is write-up funds only for 95038. See 95038 for status. | | |
| 96043B | Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures | USFS | Annual report being drafted. | | |
| 96048-BAA | Historical Analysis of Sockeye Salmon Growth Among Populations Affected by Overescapement in 1989 | NOAA | Final report being drafted. | | |
| 96052 | Community Involvement & Use of Traditional Knowledge | ADFG/Miraglia | Annual report being drafted. | | Began as 95052. |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96064 | Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in Prince William Sound | ADFG | Annual report being drafted. | | |
| 96074 | Herring Reproductive Impairment | NOAA | Annual report being drafted. | | |
| 96076 | Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon | NOAA | Annual report being drafted. | | |
| 96086 | Herring Bay Monitoring and Restoration Studies | ADFG | Project is close-out/report-writing funds only for 95086C. See 95086C for status. | | |
| 96090 | Mussel Bed Restoration and Monitoring | NOAA | Project is report writing funds only for 95090. See 95090 for status. | | |
| 96101 | Removal of Introduced Foxes From Islands | DOI | Project is report-writing funds only for 95101. See 95101 for status. | | |
| 96106 | Subtidal Monitoring: Eelgrass Communities | ADFG | Project is close-out/report-writing funds only for 95106. See 95106 for status. | | |
| 96115 | Sound Waste Management Plan | ADEC | Project is close-out only for 95115. See 95115 for status. | | |
| 96127 | Tatitlek Coho Salmon Release | ADFG/Moore | Annual report being drafted. | | Began as 95127. |
| 96131 | Chugach Native Region Clam Restoration | ADFG/Moore | Annual report being drafted. | | |
| 96139A1 | Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass Improvement | ADFG | Annual report being drafted. | | |
| 96139A2 | Spawning Channel Construction Project Port Dick Creek, Lower Cook Inlet | ADFG | Annual report being drafted. | | |
| 96139C1 | Montague Riparian Rehabilitation Monitoring Program | USFS | Final report being drafted (report writing funded under 97139C1). | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96142-BAA | Status and Ecology of Kittlitz's Murrelet in Prince William Sound | NOAA | Annual report being drafted. | | |
| 96144 | Common Murre Population Monitoring | DOI | Annual report being drafted. | Roseneau, D.G., A.B. Kettle, and G.V. Byrd. 1997. Common murre population monitoring.<br>Found no evidence that common murre populations have begun to increase at Nord Island, and no significant change at East Amatuli Light Rock although there was a hint of a positive trend. The only data that demonstrated significant increases were from two plots, one on East Amatuli Light Rock and one on the main island. | 93049, 94049, 95/96163J, 96163M |
| 96145 | Cutthroat Trout and Dolly Varden: the Relation Among and Within Populations of Anadromous and Resident Forms | USFS | Annual report being drafted. | | |
| 96149 | Archaeological Site Stewardship | ADNR | Annual report being drafted. | | |
| 96154 | Comprehensive Community Plan for Restoration of Archaeological Resources in PWS and Lower Cook Inlet | USFS | Final report submitted to Restoration Office. Not yet at OSPIC. | | |
| 96159 | Surveys to Monitor Marine Bird Abundance In Prince William Sound During Winter and Summer 1996 | DOI | Final report being drafted (report writing funded under 97159). | | |
| 96161 | Differentiation and Interchange of Harlequin Duck Populations Within N. Pacific Region | DOI | Annual report being drafted. | Preliminary genetics results available from all areas (inclusive site-specific differentiation incomplete). Birds banded at Katmai (N=39) and Kodiak (N=313). | 96025, 96427 |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96162 | Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in Prince William Sound, AK | ADFG | Annual report being drafted. | | |
| 96163 | APEX: Apex Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska | NOAA DOI | | | |
| 96163A | Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species | NOAA | Annual report being drafted. | | |
| 96163B | Foraging of Seabirds | DOI | See 96163A. | Although walleye pollock made up a large portion of the forage biomass, few seabirds were associated with this species. Black-legged kittiwakes, pigeon guillemots, and marbled murrelets were observed in shallow water near shore. Glaucous-winged gulls and tufted puffins were observed significantly further from shore. | |
| 96163C | Fish Diet Overlap Using Fish Stomach Content Analysis | NOAA | See 96163A. | | |
| 96163D | Distribution of Forage Fish as Indicated by Puffin Diet Sampling | DOI | Project is report-writing funds only for 95163D. | | |
| 96163E | Black-legged Kittiwakes as Indicators of Forage Fish Availability | DOI | See 96163A. | | |
| 96163F | Factors Affecting Recovery of Pigeon Guillemot Populations | DOI | See 96163A. | | |
| 96163G | Diet Composition, Reproductive Energetics, and Productivity of Seabirds | NOAA | See 96163A. | | |
| 96163I | APEX Planning and Project Leader | DOI | See 96163A. | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96163J | Barren Islands Seabird Studies | DOI | See 96163A. | Roseneau, D.G., A.B. Kettle, and G.V. Byrd. 1997. Barren Islands seabird studies.<br>At East Amatuli Island, productivity of common murres and black-legged kittiwakes was high and normal, respectively, while productivity of tufted puffins was low. Growth rates of kittiwake chicks was normal, but growth of tufted puffin chicks was very slow. Diets of murre and puffin chicks were similar to those of 1995 and 1995; diets of kittiwake chicks in 1996 contained more sand lance than during the previous two years. Common murre nesting chronology was earlier than in 1995, continuing a trend that started in 1991. | 96144<br>96163M<br>93/94039 |
| 96163K | Using Predatory Fish to Sample Forage Fish | DOI | Project is report-writing funds only for 95163K. See 95163K for status. | | |
| 96163L | Historical Review of Ecosystem Structure in the PWS/GOA Complex | DOI | See 96163A. | | |
| 96163M | Lower Cook Inlet Study | DOI | See 96163A. | | |
| 96163N | Black-legged Kittiwake Feeding Experiment | DOI | See 96163A. | | |
| 96163O | Statistical Review | DOI | See 96163A. | | |
| 96163P | Sand Lance Hydrocarbon Exposure | NOAA | Draft final report submitted to Chief Scientist January 29, 1997; under peer review. (NOTE: These results will also be included in summary form in the integrated 96163 annual report.) | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96165 | Genetic Discrimination of Prince William Sound Herring Populations | ADFG | Annual report being drafted. | | |
| 96166 | Herring Natal Habitats | ADFG | Annual report being drafted. | | |
| 96170 | Isotope Ratio Studies of Marine Mammals in Prince William Sound | ADFG | Annual report being drafted. | | |
| 96180 | Kenai Habitat Restoration & Recreation Enhancement Project | ADNR | Annual report being drafted. | | |
| 96186 | Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound | ADFG | Annual report being drafted. | | |
| 96188 | Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in Prince William Sound | ADFG | Annual report being drafted. | | |
| 96190 | Construction of a Linkage Map for the Pink Salmon Genome | ADFG | Annual report being drafted. | | |
| 96191A | Oil-Related Embryo Mortalities in PWS Pink Salmon Populations | ADFG | Annual report being drafted. | | |
| 96191B | Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study) | NOAA | Results of this project will be presented in the report being prepared under 96076. See 96076 for status. | | |
| 96195 | Pristane Monitoring in Mussels and Predators of Juvenile Pink Salmon & Herring | NOAA | Annual report being drafted. | | |
| 96196 | Genetic Structure of Prince William Sound Pink Salmon | ADFG | Annual report being drafted. | | |
| 96210 | Prince William Sound Youth Area Watch | ADFG | Annual report submitted to Chief Scientist November 5, 1996; under peer review. | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96214 | Documentary on Subsistence Harbor Seal Hunting in PWS | ADFG | No report required; copy of video will be provided to OSPIC. | | |
| 96220 | Eastern PWS Wildstock Salmon Habitat Restoration | USFS/Schmid | Annual report being drafted. | | |
| 96222 | Chenega Bay Salmon Restoration -- Anderson Creek | USFS/Murphy | Project canceled; no report required. | | |
| 96225 | Port Graham Pink Salmon Subsistence Project | ADFG/Moore | Annual report being drafted. | | |
| 96244 | Community-Based Harbor Seal Management and Biological Sampling | ADFG/Fall | Annual report being drafted. | | Began as 94244, continued as 95244. |
| 96255 | Kenai River Sockeye Salmon Restoration | ADFG | Final report being drafted (report writing funded under 97255). | | |
| 96256 | Columbia and Solf Lakes Sockeye Salmon Stocking | USFS | Solf Lake: Annual report being drafted.<br>Columbia Lake: Feasibility report submitted to Restoration Office; under review. | | |
| 96258A | Sockeye Salmon Overescapement Project | ADFG | Final report being drafted (report writing funded under 97258A). | | |
| 96259 | Restoration of Coghill Lake Sockeye Salmon | ADFG | Final report being drafted (report writing funded under 97259). | | |
| 96272 | Chenega Chinook Release Program | ADFG | Annual report being drafted. | | |
| 96290 | Hydrocarbon Data Analysis, Interpretation, and Database Maintenance | NOAA | No report required. | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96291 | Chenega-area Shoreline Residual Oiling Reduction | ADEC | Project was funded as a two-year capital activity; final report will be submitted at completion of project. | | |
| 96320 | Sound Ecosystem Assessment (SEA) | ADFG | | | |
| 96320E | Salmon and Herring Predation | ADFG | Annual report being drafted. | | |
| 96320G | Phytoplankton and Nutrients | ADFG | See 96320E. | | |
| 96320H | Zooplankton in the PWS Ecosystem | ADFG | See 96320E. | | |
| 96320I | Isotope Tracers - Food Webs of Fish | NOAA | See 96320E. | | |
| 96320J | Information Systems and Model Development | NOAA/ADFG | See 96320E. | | |
| 96320K | PWSAC: Experimental Fry Release | ADFG | See 96320E. | | |
| 96320M | Physical Oceanography in PWS | NOAA/ADFG | See 96320E. | | |
| 96320N | Nekton/Plankton Acoustics | NOAA/ADFG | See 96320E. | | |
| 96320Q | Avian Predation on Herring Spawn | USFS | Project is report-writing funds only for 95320Q. See 95320Q for status. | | |
| 96320R | SEA Trophodynamic Modeling and Validation Through Remote Sensing | ADFG | See 96320E. | | |
| 96320T | Juvenile Herring Growth and Habitat Partitioning | ADFG | See 96320E. | | |
| 96320U | Energetics of Herring and Pollock | ADFG | See 96320E. | | |
| 96320Y | Variation in Local Predation Rates on Hatchery-Released Fry | ADFG | See 96320E. | | |

| Project # | Project Title | Lead Agency | Report Status | References and Results | Related Projects |
|---|---|---|---|---|---|
| 96320Z1 | Synthesis and Integration | ADFG | See 96320E. | | |
| 96326 | Completion of NRDA MM6/Data Re-analysis | DOI | Project is report-writing funds only for MM6. See MM6 for status. | | |
| 96427 | Harlequin Duck Recovery Monitoring | ADFG | Annual report being drafted. | | |
| 96507 | EVOS Symposium Publication | NOAA | Project is close-out funds only for 94507. See 94507 for status. | | |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97001 | Recovery of Harbor Seals From EVOS: Condition and Health Status | M. Castellini/UAF | ADFG | Oct - Dec:<br>UNDERWAY-Analysis and statistical study of all blood samples.<br>DONE-Collection of archived blubber samples.<br>UNDERWAY-Analysis of blubber water content.<br>Jan - March:<br>-Preparation of blubber samples for bomb calorimetry.<br>-Modeling of body morphometrics.<br>-Samples outside of PWS.<br>April - June:<br>-Analysis and statistical study of blood samples.<br>-Collection of field samples outside of PWS.<br>-Collection of field samples inside PWS.<br>-Analysis of all blood samples.<br>July - Sept:<br>-Modeling of body morphometrics and blubber data.<br>-Modeling of body condition indices. |
| 97007A | Archaeological Index Site Monitoring | D. Reger/ADNR | ADNR | April - June:<br>-Finalize arrangements for fieldwork.<br>-Submit charcoal and sediment samples for analysis. |
| 97007B-CLO | Site Specific Archaeological Restoration | L. Yarborough/USFS | USFS | Oct - Dec:<br>UNDERWAY -Prepare manuscript for peer-review professional journals.<br>Jan - March:<br>UNDERWAY -Prepare presentations for Oil Spill communities.<br>-Presentations/discussions in Oil Spill communities.<br>SCHEDULED FOR PRESENTATION 4/6/97 -Prepare paper for SAA. |

# *Exxon Valdez* Oil S[illegible]Project Status Summary
# 1997 Work Plan
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97009D-CLO | Survey of Octopuses in Intertidal Habitats | D. Scheel/Prince William Sound Science Center | USFS | Sept - Dec:<br>DONE -Analyses from summer field work.<br>Jan - Mar:<br>UNDERWAY -Preparation of final report.<br>UNDERWAY -Draft manuscripts for submission to professional journals. |
| 97012-BAA | Comprehensive Killer Whale Investigation in Prince William Sound | C. Matkin/North Gulf Oceanic Society | NOAA | Sept - Dec:<br>UNDERWAY -Data analysis.<br>Jan - March:<br>-Convert prey data to geographic information system format.<br>-Begin draft of manuscript on area use.<br>April - June:<br>-Killer whale biopsy emphasis fieldwork.<br>-Analyze correlations with prey.<br>-Analyze winter recordings from remote hydrophone.<br>July - Sept:<br>-Arrange for Restoration and Personal Use licenses from Chenega Corporation.<br>-Analyze previous year's recordings.<br>-Replace hydrophone.<br>-Begin draft of manuscript on geographic distributions of foraging behaviors.<br>-Killer whale monitoring emphasis field work.<br>-Killer whale biopsy emphasis field work.<br>-Presentations and interviews with elders at Chenega, Cordova, and Tatitlek.<br>-Set up receiving stations in Chenega and Port San Juan.<br>-Train volunteers and technicians who will maintain batteries. |

# *Exxon Valdez* Oil S[illegible]Project Status Summary
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97025 | Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators (NVP) | L. Holland-Bartels, et al/NBS-DOI | DOI | Sept - Dec:<br>DONE -Sea otter: Aerial survey of western Prince William Sound.<br>DONE -Harlequin: Continue survival monitoring, skiff surveys, and collections of Barrow's goldeneyes.<br>DONE -Project meeting to discuss field season outcomes and develop/revise proposed approach.<br>Jan - March:<br>-Invertebrate predator: Complete sampling of all study sites.<br>-Harlequin: Continue survival monitoring, skiff surveys, and collections of Barrow's goldeneyes.<br>April - June:<br>-Pigeon guillemot: Active nest surveys, blood sampling, prey sampling, and nest monitoring.<br>-Sea otter: Prey selection and foraging success.<br>-River otter: Live trapping for morphometrics and tissue sampling.<br>-Sea otter: Beach-cast carcass survey.<br>-Avian co-predators: Boat surveys, collections, and behavioral observations.<br>July - Sept:<br>-Pigeon guillemot: Active nest surveys, blood sampling, prey sampling, and nest monitoring.<br>-Sea otter: Aerial survey of Prince William Sound, capture for morphometrics and tissue collection. Prey selection and foraging success.<br>-Mussel/clam/urchin/fish/duck food and invertebrate predators:<br>Vessel charter to sample study areas.<br>-Avian co-predators: Boat surveys and behavioral observations.<br>-River otter: Latrine sites located, sampled, and monitored. |

# *Exxon Valdez* Oil S Project Status Summary
# 199 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97026-CLO | Report Writing: Integration of Microbial and Chemical Sediment Data | J. Braddock/UAF | ADEC | Oct - Dec:<br>-Funding approved 12/6/96.<br>Jan - March:<br>UNDERWAY -Complete final report.<br>-Prepare manuscript for publication. |
| 97043B | Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures | D. Gillikin/USFS | USFS | August:<br>-Inspect and measure effects of installed structures.<br>-Conduct population estimates of primary units. |

# *Exxon Valdez* Oil S[illegible] Project Status Summary
# 199[illegible] Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97052A | Community Involvement | P. Brown/Chugach Regional Resources Commission | ADFG | Oct - Dec: (Spill Area-Wide Coordinator)<br>DONE -Prepare subcontracts with communities<br>DONE -Conduct training/orientation for facilitators<br>DELAYED -Send activity report to facilitators twice each month<br>SOME -Receive report from each facilitator at end of each month<br>UNDERWAY -Receive resource inventory from each facilitator<br>UNDERWAY -Compile/distribute resource inventories to PIs<br>Contact PIs who have community involvement component in FY 97 projects to assist in implementation<br>SOME -Attend Trustee Council and RWF meetings<br>Oct - Dec: (ADF&G/Subsistence Division)<br>DONE -Renew cooperative agreement with CRRC<br>Jan - Mar: (Spill Area-Wide Coordinator)<br>Assist/coordinate assistance in preparing project proposals<br>Send activity report to facilitators twice each month<br>Receive report from each facilitator at end of each month<br>Attend Trustee Council and RWF meeting<br>Jan - Mar: (ADF&G/Subsistence Division)<br>Assist communities in preparing project proposals<br>April - June: (Spill Area-Wide Coordinator)<br>Coordinate facilitators' review of FY 98 proposals<br>Recommendations to Exec. Dir. regarding TEK and community involvement in FY 98 proposals<br>Send activity report to facilitators twice each month<br>Receive report from each facilitator at end of each month<br>Attend Trustee Council and RWF meetings<br>July - Sept: (Spill Area-Wide Coordinator)<br>Send activity report to facilitators twice each month<br>Receive report from each facilitator at end of each month<br>Attend Trustee Council and RWF meetings |

# *Exxon Valdez* Oil S Project Status Summary
# 199 Work Plan
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97052B | Traditional Ecological Knowledge | P. Brown-Schwalenberg/CRRC | ADFG | Oct - Dec: (ADF&G/Subsistence Division)<br>DONE - Renew cooperative agreement with CRRC<br>Oct - Dec: (CRRC)<br>DONE - Establish TEK Advisory Group<br>DONE (HIRED 2) - Hire TEK Specialist<br>DONE IN JANUARY - TEK Specialist contact PIs who have TEK components in their FY 97 projects regarding implementation<br>Jan - March: (ADF&G/Subsistence Division)<br>Complete preparation of reference guide to existing TEK<br>Jan - March: (CRRC)<br>TEK Specialist contact PIs regarding including TEK in FY 98 proposals<br>April - June: (CRRC)<br>TEK Specialist make recommendations to Executive Director regarding FY 98 proposals |

# *Exxon Valdez* Oil S Project Status Summary
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97064 | Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS | K. Frost/ADFG | ADFG | Oct - Dec:<br>ONGOING -Analysis of fatty acid samples by Dalhousie.<br>UNDERWAY -Analysis of aerial survey data.<br>ONGOING -Analysis of genetic samples by SWFSC.<br>DONE -Analysis of other data, modeling.<br>UNDERWAY Analyze SLTDR data from previous year<br>DONE -Meet with hunters about study results, distribute newsletter.<br>-Meet with SWFSC regarding genetics analyses.<br>Jan - March:<br>-Order SLTDRs for field season.<br>-Coordination meeting with other ADF&G harbor seal projects.<br>-Arrange logistics (boats, airplanes, equipment, contracts, supplies).<br>-Reserve ARGOS satellite channels.<br>April - June:<br>-Catch seals, collect samples; attach SLTDRS as decided.<br>July - Sept:<br>-Analysis of fatty acid samples by Dalhousie.<br>-Conduct aerial surveys during molting.<br>-Attach 6 - 12 SLTDRs, sampling. |

# *Exxon Valdez* Oil S Project Status Summary
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# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97076 | Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon | A. Wertheimer/NOAA | NOAA | Oct - March:<br>UNDERWAY -Complete contractual arrangements for labor, vessel support, fishery, and weir sampling.<br>April - June:<br>-Plumb, configure incubation matrix for breeding experiment progeny.<br>July - Sept:<br>-Set up weir, adult holding facility at LPW.<br>-Evaluate survival in incubators to fry emigration.<br>-Adult recovery operations at weired and unweired streams.<br>-Collect and spawn pink salmon from P-1 and F-1 returns to LPW. |
| 97090-CLO | Mussel Bed Restoration and Monitoring | M. Babcock/NOAA | NOAA | Oct - Dec:<br>DELAYED; WRITING UNDERWAY -Submission of histopathology paper to journal.<br>DONE -Presentation of Mussel Bed Restoration at the International Conference on Shellfish Restoration.<br>DELAYED; WRITING UNDERWAY -Submission of survey paper to journal.<br>DELAYED -Submission of restoration paper to journal. |
| 97100 | Administration, Science Management, and Public Information | All Trustee Council Agencies | ALL | ONGOING |

# *Exxon Valdez* Oil S Project Status Summary
# 199 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97115 | Implementation of the Sound Waste Management Plan: Environmental Operations and Used Oil Management System | J. Winchester/Prince William Sound Economic Development Council | ADEC | Oct - Dec:<br>DONE -Select designer for EVOS stations.<br>UNDERWAY -Complete EVOS station designs.<br>Jan - March:<br>Develop bid documents for construction and acquisition of used oil management equipment.<br>Solicit bids.<br>April - June:<br>Bid opening and contract award.<br>July - Sept:<br>Construction of EVOS stations and purchase of used oil equipment. |
| 97126 | Habitat Protection and Acquisition Support | C. Fries/ADNR, D. Gibbons/USFS | ADNR | Oct - Dec:<br>Work proceeding on Chenega, Tatitlek, Eyak, and numerous small parcels. |
| 97127 | Tatitlek Coho Salmon Release | G. Kompkoff/Tatitlek IRA Council | ADFG | April - June:<br>-Smolt transported to Boulder Bay and placed in net pens.<br>-Smolt released into Boulder Bay<br>July - Sept:<br>-Egg take. |
| 97131 | Chugach Native Region Clam Restoration | D. Daisy/Chugach Regional Resources Commission | ADFG | Sept - Dec:<br>DONE -Continue to collect broodstock.<br>DONE -Transport to hatchery.<br>PLUS research underway to explain why clam larvae die prior to setting.<br>Jan - Mar:<br>-Transfer 5 mm seed to hatchery nursery and FLUPSY. |

# *Exxon Valdez* Oil S Project Status Summary
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97139A1 | Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass Improvement | S. Honnold/ADFG | ADFG | Oct - Dec:<br>TERMINATED DUE TO HIGH WATER - Spawner abundance and distribution surveys<br>DONE -Data summary.<br>Jan - March:<br>-Egg-to-fry survival sampling.<br>July - Sept:<br>-Juvenile coho abundance sampling.<br>-Spawner abundance and distribution surveys. |
| 97139A2 | Port Dick Creek Tributary and Development | N. Dudiak/ADFG | ADFG | Oct - Dec:<br>DONE -Monitor and measure the extent of colonization by pink and chum salmon, hydrologic parameters (water level, water temperature, stream velocity, and salinity) and proposed sedimentologic stability parameters (bedload transport, accumulated sediments, and gravel/cobble transport rates).<br>April - June:<br>-Prepare field equipment and arrange logistics.<br>-Enumerate pink and chum salmon fry emergence.<br>July - Sept:<br>-Monitor pink and chum salmon return and colonization.<br>-Supplement colonization if natural colonization is not adequate. |
| 97139C1-CLO | Montague Riparian Rehabilitation Monitoring | D. Schmid/USFS | USFS | April - June:<br>-Arrange logistics, hire personnel.<br>-Examine structures.<br>-Measure channel changes.<br>-Collect growth data.<br>July - Sept:<br>-Analyze data.<br>-Write final report. |

# *Exxon Valdez* Oil S Project Status Summary
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97142-BAA | Status and Ecology of Kittlitz's Murrelets in Prince William Sound | R. Day/ABR, Inc. | NOAA | Jan - March:<br>UNDERWAY -Arrange logistics (boats, equipment, etc.).<br>April - June:<br>-Conduct early-summer cruise.<br>July - Sept:<br>-Conduct late-summer cruise.<br>-Analyze isotope ratios and stomach contents.<br>-Keypunch data and OA/QC.<br>-Digitize, measure, and QA/QC geographic data. |
| 97144 | Common Murre Population Monitoring | D. Roseneau/DOI-FWS | DOI | Oct - Dec:<br>DONE -Analyze data.<br>DELAYED UNTIL MID-FEBRUARY-Arrange for vessel contract.<br>DONE -Begin coordinating logistics with APEX project 96163J.<br>Jan - March:<br>-Arrange for hiring of seasonal employee.<br>-Check/repair equipment and other gear.<br>April - June:<br>-Finalize vessel contract.<br>-Check and update census plot booklets for the colonies.<br>-Purchase supplies.<br>July - Sept:<br>-Collect data in Barren Islands.<br>-Enter data. |

# *Exxon Valdez* Oil S[illegible] Project Status Summary
# 1997 Work Plan
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97145 | Cutthroat Trout and Dolly Varden: Relation Among and Within Populations of Anadromous and Resident Forms | G. Reeves/USFS, Pacific Northwest Research Station | USFS | Oct - Dec:<br>DONE -Renew cooperative agreement with OSU.<br>DONE -Evaluate FY96 collections and make appropriate changes in collection sites.<br>DONE -Conduct genetic and meristic analysis of Dolly Varden.<br>DONE -Begin otolith microchemistry analysis.<br>Jan - March:<br>UNDERWAY -Complete genetic screening.<br>UNDERWAY -Assemble required field gear.<br>April - June:<br>-Collect samples of anadromous cutthroat trout.<br>-Genetic, meristic, and otolith microchemistry analysis.<br>July - Sept:<br>-Collect samples of resident cutthroat trout and Dolly Varden.<br>-Collect samples of anadromous Dolly Varden at field sites.<br>-Continue genetic and meristic analysis. |
| 97149 | Archaeological Site Stewardship | D. Reger/ADNR | ADNR | Jan - March:<br>UNDERWAY -Compile steward reports, process film.<br>April - June:<br>-Complete review of site selection from FY96.<br>-New site selection.<br>-Review and training of stewards.<br>-Complete site visits.<br>July - Sept:<br>-Complete steward monitoring of sites for season. |

# *Exxon Valdez* Oil Spill Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97159-CLO | Surveys to Monitor Marine Bird Abundance in Prince William Sound During Winter and Summer: Report and Publication Writing | B. Agler/DOI-FWS | DOI | NO STATUS REPORT RECEIVED....<br>Sept - Dec:<br>-Follow up on murrelet paper.<br>-Follow up on sea otter paper.<br>-Prepare draft report of 1996 surveys.<br>Jan - March:<br>-Attend Pacific Seabird Group Meeting, present one paper.<br>-Attend Annual Restoration Workshop.<br>-Submit long-term trends paper to a journal.<br>-Submit paper on comparison of marine bird populations among three areas to journal.<br>April - June:<br>-Final Report complete.<br>July - Sept:<br>-Submit trends since the oil spill paper. |
| 97161 | Differentiation and Interchange of Harlequin Duck Populations Within the North Pacific | B. Goatcher/Katmai National Park | DOI | Oct - Dec:<br>UNDERWAY -Laboratory analysis/report.<br>DONE -Band re-sightings and recoveries at Kodiak National Wildlife Refuge and Katmai National Park<br>April - June:<br>-Procure equipment and supplies.<br>-Refine GIS database.<br>-Rebuild capture pens.<br>July - Sept:<br>-Harlequin duck capture.<br>-Genetic sample collection and banding. |

# *Exxon Valdez* Oil S[illegible] Project Status Summary
# 199[illegible] Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97162 | Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in Prince William Sound | G. Marty/UC Davis; R. Kocan/Univ. Wash., C. Kennedy & A. Farrell, Simon Fraser Univ. | ADFG | Oct - Dec:<br>DONE IN PWS ONLY; UNABLE TO LOCATE FISH IN SITKA SOUND - Collect fish samples.<br>DONE-Scale analysis (age).<br>-Evaluate fitness criteria in herring under varying densities without stressors.<br>DONE - Stress studies on 0-year and 2-year herring<br>DONE - Data analysis for disease challenge of oil-exposed juveniles with Vibrio anguillarum; measurement and data analysis of immunological parameters<br>UNDERWAY - Differential white blood cell counts and plasma chemistries for fall field samples<br>Jan - March:<br>DONE; ALL SAMPLES WERE NEGATIVE FOR VIRUS AND SIGNIFICANT BACTERIA -Virology and bacteriology.<br>-IgM assay.<br>-Histopathology and identification of *Ortholinea orientalis*.<br>-VEN analysis and leukocyte differential counts.<br>April - June:<br>-Statistical analysis.<br>-Collect spring samples.<br>-Scale analysis (age).<br>-Plasma chemistries.<br>-Virology and bacteriology.<br>-VEN analysis, leukocyte differential counts, and CPK isozyme analysis.<br>-IgM assay.<br>-Histopathology and identification of *Ortholinea orientalis*.<br>-Begin reproductive tests.<br>-Analysis of single stressor data.<br>-Stress infected SPF herring with increased densities.<br>July - Sept:<br>Evaluate temperature modulation of fitness criteria. |

# *Exxon Valdez* Oil S[illegible]Project Status Summary
# 1997 Work Plan
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97163 | APEX: Alaska Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska | D. Duffy, et al/UAA | NOAA | Oct - May:<br>UNDERWAY - Data analysis.<br>Jan - Mar:<br>- Prepare for Restoration Workshop, APEX review, annual report, DPD submissions<br>April - June:<br>- Arrange for summer vessels<br>July - Sept:<br>-Acoustic sampling in PWS and Lower Cook Inlet.<br>- Other field activities. |
| 97165 | Genetic Discrimination of Prince William Sound Herring Populations | J. Seeb/ADFG | ADFG | Oct - Dec:<br>DONE -Evaluate 95165 contract results.<br>DONE -Award contract for FY96 samples.<br>DONE -Tissue sampling and archiving.<br>Jan - March:<br>-Evaluate final FY95 lab results.<br>-Plan for 1997 sampling if needed.<br>-Initiate technology transfer.<br>April - June:<br>-Collection of samples if needed.<br>-Complete technology transfer.<br>July - Sept:<br>-Conclude laboratory analysis of remaining FY96 and FY97 samples. |

# *Exxon Valdez* Oil S Project Status Summary
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# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97166 | Herring Natal Habitats | M. Willette/ADFG | ADFG | Jan - March:<br>DONE - 1996 biomass estimates - Dept. Forecast and Stock Assessment Reports.<br>April - June:<br>-BEFORE ONSET OF SPAWNING:<br>---Conduct acoustic survey (20 d).<br>---Collect AWL, fecundity, disease, genetic stock ID, and bioenergetics samples.<br>-AFTER ONSET OF SPAWNING:<br>---Initiate dive surveys.<br>---Complete dive surveys.<br>---Begin lab processing of diver calibration and fecundity samples.<br>---Complete calibration sample processing samples.<br>July - Sept:<br>-Finalize estimate of spawning biomass. |
| 97167-BAA | Preparation and Curation of Seabirds Salvaged from the *Exxon Valdez* Spill | S. Rohwer/University of Washington Burke Museum | NOAA | Oct - Dec:<br>UNDERWAY -Complete all specimen preparation.<br>UNDERWAY - Catalog all specimens and install them in the collection. |

# *Exxon Valdez* Oil S Project Status Summary
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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97169 | 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 | Oct - Dec:<br>UNDERWAY -Develop amplification primers and protocols for first three new loci.<br>UNDERWAY -Screen available samples from murres and guillemots for five loci previously developed in VLF's lab.<br>Jan - March:<br>-Develop protocols for three new genes.<br>-Screen available samples from murres and guillemots for five more loci.<br>-Arrange logistics for sample collections.<br>April - June:<br>-Develop protocols for three new genes.<br>-Screen available samples from murres and guillemots for five more loci.<br>-Blood, feather and tissue samples collected from sites in Alaska.<br>July - Sept:<br>-Attend conferences.<br>-Develop protocols for final four new genes.<br>-Screen available samples from murres and guillemots for five more loci. |
| 97170 | Isotope Ratio Studies of Marine Mammals in Prince William Sound | D. Schell/UAF Institute of Marine Science | ADFG | Oct - Dec:<br>UNDERWAY -Prepare and analyze isotope ratio samples collected in 1994-1996.<br>UNDERWAY -Collect vibrissae from isotopically labeled seals and sea lions.<br>Jan - March:<br>-Synthesis and coordination for sampling in 1997.<br>April - June:<br>-Field work and sampling.<br>-Captive animal experiments.<br>July - Sept:<br>-Analysis of samples.<br>-Data synthesis, identification of gaps.<br>-Manuscript preparation. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97180 | Kenai Habitat Restoration & Recreation Enhancement | M. Rutherford/ADNR, M. Kuwada/ADFG | ADNR | Oct - Dec:<br>DONE -Solicit nominations for second round of projects.<br>Jan - March:<br>-Review nominations and site assessments.<br>-Conduct evaluations with the IDT for second round nominations and EVOS parcels.<br>-Agency coordination on cooperative agreements.<br>-Prepare environmental compliance documents.<br>-Conduct public review process.<br>-Review detailed design plans.<br>-Design and produce educational materials and signs.<br>-Establish cooperative agreements with public landowners for second round and EVOS projects.<br>April - June:<br>-Management and oversight of project construction.<br>-Put up signs and information displays.<br>-Establish monitoring plots.<br>July - Sept:<br>-Inspect all project sites to check for compliance with design parameters.<br>-Monitor revegetation sites.<br>-Monitor public use of completed project and proposed sites for next year. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97186 | Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound | T. Joyce/ADFG | ADFG | Oct - June:<br>UNDERWAY-Hire personnel and order supplies<br>UNDERWAY- Create and test computer programs and spreadsheets<br>DONE - Data analysis<br>UNDERWAY - Report writing<br>June:<br>-Apply tags to pink salmon fry at hatcheries<br>July - Sept:<br>-Scan catches<br>-Recover tagged fish in harvests and brood stocks<br>-Recover/decode tags<br>-Provide in-season catch composition estimates by time and area |
| 97188 | Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon In Prince William Sound | T. Joyce/ADFG | ADFG | Oct - Dec:<br>DONE -Apply thermal marks to FY96 embryos at four pink salmon hatcheries<br>Jan - March:<br>3-WEEK POST MARK COLLECTED AND EXAMINED<br>-Collect samples from incubators to elevate thermal mark quality<br>April - June:<br>-Process and evaluate otoliths<br>July - Sept:<br>-Collect otoliths, process otoliths, analyze data, make recommendations |
| 97190 | Construction of a Linkage Map for the Pink Salmon Genome | F. Allendorf/Univ. Montana | ADFG | Oct - Dec:<br>UNDERWAY -Screening of DNA polymorphisms in 1996 brood-year parents and progeny to confirm haploid families.<br>Jan - Sept:<br>-Screen DNA polymorphisms to test for Mendelian interitance and joint segregation in 1996 brood-year progeny. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97191A | Field Examination of Oil-Related Embryo Mortalities that Persist in Pink Salmon Populations in PWS | M. Willette/ADFG<br>J. Seeb/ADFG | ADFG | Oct - Dec:<br>DONE -Embryo deposition sampling.<br>DONE -Analysis of brood year 1995 embryo data.<br>-Finish mtDNA analysis of 1995 collections.<br>Jan - March:<br>-Allozyme lab analyze 1996 collections.<br>-Statistically analyze 1995 collections.<br>April - June:<br>-mtDNA analysis of 1996 collections.<br>-Final report of FY96 results.<br>-Allozyme lab analyze experimental matings.<br>July - Sept:<br>-Statistically analyze 1996 collections and 1995 matings.<br>-Field collections of 1997 samples. |
| 97194 | Pink Salmon Spawning Habitat Recovery | M. Murphy/NOAA | NOAA | Oct - Dec:<br>DONE -Prioritize samples for fast screening and GCMS analysis.<br>Jan - March:<br>UNDERWAY -Analyze samples for hydrocarbons.<br>April - June:<br>UNDERWAY - Data entry and statistical analysis.<br>July - Sept:<br>-Write final report on hydrocarbon concentrations. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97195 | Pristane Monitoring in Mussels | J. Short/NOAA | NOAA | Oct - Dec:<br>UNDERWAY -Analyze 1996 hydrocarbon data.<br>UNDERWAY -Revise brochure.<br>Jan - March:<br>-Plan logistics for FY97 field season.<br>-Prepare report for public and high schools (94, 95 & 96 data).<br>April - June:<br>-Collect mussel samples.<br>July - Sept:<br>-Analyze samples for pristane and collect mussel samples. |
| 97196 | Genetic Structure of Prince William Sound Pink Salmon | J. Seeb/ADFG | ADFG | Oct - Dec:<br>WAITING FOR WDFW TO RECONFIRM ALLELE MOBILITIES PRIOR TO GIVING THEM TO ADF&G -Acquire data from WDFW on 1995 collections.<br>DONE -Finish mtDNA analysis of 1995 collections.<br>Jan - March:<br>DONE -Allozyme lab analyze 1995 collections.<br>UNDERWAY -Statistically analyze 1995 mtDNA collections.<br>April - June:<br>-mtDNA analysis of 1995 collections.<br>-Final report of FY96 results.<br>UNDERWAY -Allozyme lab analyze experimental matings.<br>-Statistically analyze 1996 collections and 1995 matings.<br>-Field collections of 1997 samples. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97197 | Alaska SeaLife Center Fish Pass | J. Seeb/ADFG | ADFG | Oct - Dec:<br>UNDERWAY -Write amendment to the existing cooperative agreement with the City of Seward.<br>UNDERWAY -Apply for appropriate permits.<br>UNDERWAY; EXPECT EA COMPLETION 2/28/97 - NEPA compliance.<br>Jan - March:<br>UNDERWAY -Review conceptual design of fish pass and research pool and<br>-produce construction drawings.<br>April - June:<br>-Construct fish pass and research pool.<br>July - Sept:<br>-Write final report on construction and installation. |
| 97210 | Youth Area Watch | R. Sampson/Chugach School District | ADFG | Oct - Dec:<br>DONE -Students selected for participation.<br>DONE -Site teachers receive project training.<br>DONE -Students receive protocol training.<br>DONE -Sites selected for research and monitoring.<br>Jan - March:<br>-Students send information to PIs.<br>April - June:<br>-Students analyze data from projects.<br>-Students conduct escapement counts.<br>-Students visit Alaska SeaLife Center.<br>-Students complete research reports for FY97.<br>July - Sept:<br>-Submission of Youth Area Watch to peer-review journal. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97214-CLO | Documentary on Subsistence Harbor Seal Hunting in PWS | B. Simeone/ADFG | ADFG | Oct - Dec:<br>UNDERWAY; 90% COMPLETE -Complete editing of draft documentary.<br>-Community review of video (in Tatitlek).<br>-Complete final editing.<br>Jan - March:<br>-Public screening of documentary in Tatitlek (first) and Anchorage.<br>-Completion and distribution of documents.<br>April - June:<br>-Submission of project final report. |
| 97220 | Eastern PWS Wildstock Salmon Habitat Restoration | D. Schmid/USFS | USFS | Oct - March:<br>DONE -Compile and review existing information.<br>UNDERWAY (1 HIRED) -Recruit student interns.<br>April - June:<br>-Arrange logistics.<br>-Install restoration log structures on Eyak Native lands.<br>July - Sept:<br>-Analysis of field data. |

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| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97223-BAA | Analysis, Integration and Publication of Pre- and Post-Spill Data on Sea Otter Reproduction, Survival, Development, and Health | L. Rotterman and C. Monnett/Enhydra Research | NOAA | November 15:<br>DELAYED BECAUSE CONTRACT NOT PREPARED UNTIL DECEMBER -Submit for publication: Health, development, and survival of sea otter pups and weanlings in Prince William Sound after the T/V *Exxon Valdez* oil spill.<br>January 15:<br>DELAYED BECAUSE CONTRACT NOT PREPARED UNTIL DECEMBER -Submit for publication: Length-mass relationships in sea otters in Prince William Sound after the T/V *Exxon Valdez* oil spill.<br>March 15:<br>-Submit survival and reproduction of female sea otters in Prince William Sound, AK after the T/V *Exxon Valdez* oil spill.<br>May 15:<br>-Submit age-specific reproduction of female sea otters in Prince William Sound, AK. |
| 97225 | Port Graham Pink Salmon Subsistence Project | E. Anahonak, Port Graham IRA Council | ADFG | Oct. - Dec.:<br>DONE (1.65 MILLION EGGS TO EYED STAGE; 1.42 MILLION EGGS INCUBATED WITH 86% SURVIVAL RATE) - 1.5 million eggs incubated<br>UNDERWAY (OXYGEN PRODUCTION SYSTEM UPGRADED; WILL INSTALL SALTWATER PUMP IN SPRING) - Maintenance and upgrade at hatchery<br>April - June:<br>-250,000 pink salmon fry from the Port Graham hatchery placed in net pens and reared to an average weight of 8 grams.<br>-2 million fry will be reared to an average weight of one gram.<br>July - Sept:<br>-Monitor pink salmon escapement into Port Graham.<br>-Capture hatchery broodstock.<br>-Egg take. |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97230 | Valdez Duck Flats Restoration Project | J. Winchester/PWS Economic Development Council | ADNR | Oct - Dec:<br>UNDERWAY - Prepare contract between ADNR and PWSEDC.<br>Jan - April:<br>-Acquire and review relevant environmental data.<br>-Meet with Committee to assess community needs.<br>-Develop alternatives for assessing Duck Flat.<br>-Hold preliminary meeting with regulatory agencies to identify concerns.<br>-Develop a conceptual plan that evaluates alternatives.<br>-Identify a recommended plan and present to Valdez City council and community.<br>-Refine alternatives as necessary and complete final draft of conceptual plan. |
| 97231 | Marbled Murrelet Productivity Relative to Forage Fish Availability and Environmental Parameters | K. Kuletz/FWS | DOI | Oct - Dec:<br>UNDERWAY -Prepare data from 1994 and 1995 surveys and GIS coverages.<br>THREE DONE, 2 OTHERS UNDERWAY -Rewrite and submit manuscripts submitted to journals.<br>DONE -Present paper at International Symposium on Forage Fish.<br>Jan - March:<br>April - June:<br>-Conduct baseline surveys at study sites.<br>July - Sept:<br>-Enter data, prepare for late-summer surveys, APEX work.<br>-Juvenile surveys.<br>-Analysis of field data. |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97244 | Community-Based Harbor Seal Management and Biological Sampling | M. Reidel/Alaska Native Harbor Seal Commission | ADFG | Oct - Dec:<br>DONE -Update contracts with the Alaska Native Harbor Seal commission and the Unviversity of Alaska.<br>DONE -Hire technicians.<br>DONE -Hold regional training session for biological sampling in Kodiak.<br>DONE -Train new community technician in Valdez.<br>DONE -Begin biological sample collection.<br>Jan - March:<br>-Produce and distribute first proceedings report.<br>-Two-day Workshop (Alaska Native Harbor Seal Commission):<br>Demonstrate Traditional Knowledge Database.<br>April - June:<br>-Finalize harvest location site data base maps.<br>July - Sept:<br>-Evaluate second year of program. |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97247 | Kametolook River Coho Salmon Subsistence Project | J. McCullough & L. Scarborough/ADFG | ADFG | Monthly:<br>-Record temperatures.<br>-Photograph area.<br>Oct - Dec:<br>DONE - Habitat survey<br>DONE - Trap juvenile cohos<br>DONE - Collect adult coho for tissue samples<br>DONE - Talk with highschool students; involve them in field efforts<br>Jan - March:<br>-Meet with village council to discuss the project.<br>-Revise Fish Transport Permit to allow for release of fry into the landlocked lakes or adjacent rivers.<br>-Review meeting in Anchorage with assessment team to evaluate project.<br>-Write EA.<br>April - June:<br>-Release fry from aquarium into landlocked lakes.<br>-Release fry from stream side incubation box into stocking site.<br>-Install large capacity incubation boxes.<br>-Sample river and lake habitats for salmon and trout abundance, age and growth.<br>July - Sept:<br>-Perryville assistants work in Kodiak for two weeks with Pillar Creek Hatchery. |
| 97250 | Project Management | All Trustee Council Agencies | ALL | ONGOING |
| 97251-CLO | Akalura Lake Sockeye Salmon Restoration | C. Swanton/ADFG | ADFG | Oct- Dec:<br>UNDERWAY: Plan for FY 97 field studies.<br>April - June:<br>-Monitor sockeye smolt outmigration.<br>July - Sept:<br>-Monitor adult sockeye salmon escapement. |

# *Exxon Valdez* Oil S Project Status Summary
## 1997 Work Plan
## Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97255-CLO | Kenai River Sockeye Salmon Restoration | L. Seeb, J. Seeb, K. Tarbox/ADFG | ADFG | Oct - Dec:<br>DONE -Complete laboratory analyses of allozyme and DNA samples from 1996.<br>Jan - March:<br>-Statistical analyses of mixtures.<br>-Refinement of technique.<br>-Archiving of tissues and data.<br>April 15:<br>-Draft final report for FY96. |
| 97256B | Sockeye Salmon Stocking at Solf Lake | D. Gillikin/USFS | USFS | Oct - Dec:<br>UNDERWAY -Determine appropriate brood stock and potential stocking levels.<br>UNDERWAY -Coordinate with PWSAC and the PWSRPT for production planning.<br>DONE -Complete laboratory analysis of water chemistry and plankton data.<br>Jan - March:<br>UNDERWAY -Prepare for field season.<br>DONE -Complete necessary NEPA.<br>April - June:<br>-Install irrigation-type control structure at fishway outlet.<br>-Survey old fishway stream channel and new dam site at other<br>outlet.<br>-Obtain eggs for hatchery incubation. |
| 97258A-CLO | Sockeye Salmon Overescapement Project | D. Schmidt/ADFG | ADFG | February 1:<br>-Submit peer manuscript.<br>April 15:<br>-Complete draft final report for Kodiak Island.<br>July 15:<br>-Complete draft final report Kenai Peninsula. |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97259-CLO | Restoration of Coghill Lake Sockeye Salmon | G. Kyle/ADFG | ADFG | Oct - Jan:<br>UNDERWAY -Process and analyze limnological (water and zooplankton) and smolt samples.<br>April 15:<br>-Complete and submit final report. |
| 97263 | Assessment, Protection and Enhancement of Salmon Streams on Port Graham Corporation Lands | W. Meganack, Jr./Port Graham Corporation | ADFG | PROJECT DELAYED UNTIL CONTRACT NEGOTIONS, CURRENTLY UNDERWAY BETWEEN ADF&G, PORT GRAHAM CORPORATION, AND KENAI E.D.D., ARE COMPLETE.<br>Oct - Dec:<br>-Assemble information, maps and photo data.<br>-Coordinate project with ADF&G.<br>-Coordinate with fisheries scientist.<br>Jan - March:<br>-Develop final survey plan.<br>-Hire personnel.<br>-Develop maps, photos and data.<br>-Consult with users.<br>April - June:<br>-Train field crews.<br>July - Sept:<br>-Conduct habitat surveys in Port Graham, Rocky and Windy Bay. |

# *Exxon Valdez* Oil Spill Project Status Summary
## 1997 Work Plan
## Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97272-CLO | Chenega Chinook Release Program | J. Milton/Prince William Sound Aquaculture Corporation | ADFG | Oct - March:<br>UNDERWAY -Smolt rearing (brood year 95).<br>UNDERWAY - Incubate eggs.<br>April - June:<br>-Outmigration of brood year 96 fry.<br>-Install netpen at Crab Bay.<br>-Feed and imprint smolts.<br>-Dismantle and remove netpen.<br>July - Sept:<br>-Take chinook eggs for incubation.<br>-Final reporting. |
| 97286 | Elders/Youth Conference on Subsistence and the Oil Spill | B. Henrichs/Native Village of Eyak | DOI | NO STATUS REPORT RECEIVED....<br>Oct - Dec:<br>-Develop PL-638 cooperative agreement.<br>Jan - Sept:<br>-Conference planning. |
| 97290 | Hydrocarbon Data Analysis, Interpretation, and Database Maintenance | B. Nelson/NOAA | NOAA | Ongoing:<br>-Store samples.<br>-Analyze data. |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97300 | **Synthesis of the Scientific Findings from the *Exxon Valdez* Oil Spill Restoration Program** | R. Spies/Applied Marine Sciences | ADNR | Oct - Dec:<br>DONE - Provide moderate-length synthesis outlines to the Executive Director.<br>DONE -Outlines distributed to Principal Investigators.<br>UNDERWAY -Written accounts due from Principal Investigators.<br>Jan - March:<br>-Scientific editing complete on content of written accounts; distribute to Principal Investigators.<br>-Modeling workshop to be held in Anchorage.<br>-Principal Investigators to provide any further comments on edited contributions.<br>-Outline of modeling effort for FY98 provided to Executive Director. |
| 97302 | Prince William Sound Cutthroat Trout, Dolly Varden Char Inventory | K. Hodges/USFS | USFS | Oct - Dec:<br>DONE -Contact ADF&G, Native groups, anglers for information on cutthroat trout and Dolly Varden char locations.<br>DONE -Use aerial photographs, maps, channel-type information to predict which streams may have documented populations.<br>Jan - March:<br>DONE -Arrange logistics, hire crews.<br>April - June:<br>-Begin surveys.<br>July - Sept:<br>-Complete surveys.<br>-Compile results and write report. |

# *Exxon Valdez* Oil S[illegible]Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97304 | Kodiak Island Borough Master Waste Management Plan | J. Selby/Kodiak Island Borough | ADEC | Oct - Dec:<br>UNDERWAY -Establish Waste Management Committee<br>DONE -Write RFP.<br>UNDERWAY; ANTICIPATE FEBRUARY -Award contract.<br>Jan - March:<br>-First Committee meeting.<br>July - Sept:<br>-Identify and prioritize the major sources of marine pollution and<br>solid waste.<br>-Establish a public participation program.<br>-Develop waste management recycling and disposal alternatives. |
| 97306 | Ecology and Demographics of Pacific Sand Lance in Lower Cook Inlet | J. Piatt/DOI-NBS | DOI | Oct - March:<br>UNDERWAY -Consolidate all information collected in 1995 and 1996 into electronic format.<br>UNDERWAY -Establish areas where information on sandlance distribution and abundance is weak. |
| 97320 | Sound Ecosystem Assessment (SEA) | T. Cooney, et al. | ADFG | Oct - Dec:<br>OCEAN STATE, NPZ, AND NEKTON MODELS ALL UPDATED WITH FY 96 DATA-Continue ongoing modeling and data analysis.<br>HERRING FIELD WORK INITIATED FOR OVERWINTERING OBSERVATION-Continue herring program field work.<br>INITIAL PLANS MADE FOR HERRING AND OCEANOGRAPHIC CRUISES IN THE SPRING -Refine remaining FY97 field plans.<br>March - Sept:<br>-Continue salmon and oceanographic field work.<br>-Continue ongoing modeling and data analysis. |
| 97424 | Restoration Reserve | All Trustee Council Agencies | ALL | ONGOING |

# *Exxon Valdez* Oil S Project Status Summary
# 1997 Work Plan
# Quarter Ending December 31, 1996

| Proj.No. | Project Title | Proposer | Lead Agency | Project Tasks to be Completed this Quarter |
|---|---|---|---|---|
| 97427 | Harlequin Duck Recovery Monitoring | D. Rosenberg/ADFG | ADFG | Oct - Dec:<br>UNDERWAY - Data entry and analysis<br>UNDERWAY - TEK investigation<br>Jan - March:<br>-Arrange for permits.<br>-Plan logistics for winter surveys.<br>-Contract for fuel transport. Conduct winter surveys in PWS.<br>April - June:<br>-Hire technicians.<br>-Arrange field logistics for field camps.<br>-Prepare field equipment.<br>-Begin spring surveys.<br>July - Sept:<br>-End fall surveys. |

# *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**


## Teleconference on *Exxon Valdez* Oil Spill Trustee Council Issues February 10, 1997, 10 a.m. Alaska Time

Participants:

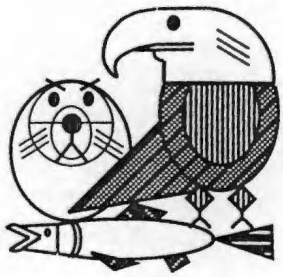
Jim Ayers, Juneau
Molly McCammon, Washington, DC
Craig Tillery, Washington, DC
Michele Brown, Juneau
Frank Rue (Rob Bosworth), Juneau

---

1. Restoration Reserve
2. Native Trustee
3. Small Parcels
   - Capital Budget
   - Schilling/Roberts Parcel
4. Other

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**



## FAX COVER SHEET

FAXED

To: Molly McCammon Number: 1-202-624-5857

From: Rebecca Williams Date: February 10, 1997

Comments: Total Pages: 2

Please hold for Molly McCammon's 2 p.m. teleconference with Jim Ayers.

Thank you

Document Sent By: Rebecca

9/9/94

**********
*** ACTIVITY REPORT ***
**********

TRANSMISSION OK

| | |
|---|---|
| TX/RX NO. | 2181 |
| CONNECTION TEL | 12026245857 |
| CONNECTION ID | |
| START TIME | 02/10 09:10 |
| USAGE TIME | 01'09 |
| PAGES | 2 |
| 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**

## FAX COVER SHEET

FAXED

To: Jim Ayers Number: 1-907-465-3532

From: Molly McCammon Date: 2-10-97

Comments: Total Pages: 2

Agenda for this mornings 10 a.m. teleconference.

Please deliver ASAP.

Document Sent By: Rebecca

9/9/94

**********
*** ACTIVITY REPORT ***
**********

TRANSMISSION OK

| | |
|---|---|
| TX/RX NO. | 2180 |
| CONNECTION TEL | 19074653532 |
| CONNECTION ID | |
| START TIME | 02/10 08:55 |
| USAGE TIME | 00'58 |
| PAGES | 2 |
| RESULT | OK |

# *Exxon Valdez* Oil Spill Trustee Council

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

FAXED

## FAX COVER SHEET

Frank Rue (Rob Bosworth)

To: Michele Brown Number:

From: Molly McCammon Date: 2-10-97

Comments: Total Pages: 2

Agenda for the 10 a.m. Teleconference this 2-m.

Please forward

ASAP.

HARD COPY TO FOLLOW no

Document Sent By: Rebecca

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

**State Trustees**
Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

**********
*** MULTI TRANSACTION REPORT ***
**********

TX/RX NO. 2182

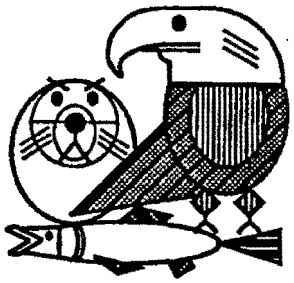
INCOMPLETE TX/RX

TRANSACTION OK [ 29] 19074652332 FRANK RUE

[ 31] 19074655070 BROWN-FAY

ERROR

**_Exxon Valdez_ Oil Spill Trustee Council**
Restoration Office
645 G Street, Suite 401, Anchorage, AK 99501-3451
907-278-8012 Fax: 907-276-7178



# MEMORANDUM

**TO:** Molly McCammon

**FROM:** Traci Cramer
Traci Cramer
Administrative Officer

**DATE:** February 10, 1997

**RE:** CRIS Fees

---

As we discussed, attached are my work papers associated with the fee charged by Court Registry Investment System (CRIS). To assist you, the following is a brief explanation.

Attachment 1

This spreadsheet was generated based on information obtained from CRIS and attached to this memorandum. For the period ending September 30, 1995, CRIS was managing 1646 cases for district courts across the nation. EVOS was only one of the cases and represented 17.96 percent of the total assets. However, EVOS fees represented 25.34 percent of the total fees generated by CRIS.

Attachment 2

This flow-chart is attached to demonstrate that the cost to the U.S. Court System is minimal. The only position devoted to CRIS is the CRIS coordinator, Kathleen Riska. While each of the participating courts are required to provide weekly reports and confirm changes in account balances, the bulk of the work is performed by the contract bank, Texas Commerce.

Attachment 3

This spreadsheet is a comparison of three fixed income managers currently on contract

with the Alaska Permanent Fund Corporation and the current 10 percent fee charged by CRIS.

Attachment 4

This spreadsheet was developed to compare the current 10 percent fee against the schedule of fees reflected in the Federal Register. For the period ending December 31, 1996, EVOS has paid a total of $1,614,263. If the fee has been based on 2 percent of earnings, EVOS would have paid $322,853 or a difference of $1,291,410.

Also attached is a comparison between the current 10 percent fee and what a 2 percent fee would have generated during calendar year 1996. Based on the 10 percent fee, EVOS paid $360,671. Had the fee been 2 percent, EVOS would have paid $72,134.

Attachment 5

This spreadsheet reflects how the joint funds have been disbursed to date. Roughly 40 percent has been disbursed to the Federal government for implementation of Trustee Council funded projects, and 60 percent has been disbursed to the State of Alaska.

Attachment 6

In the event you discuss the issue of wire transfers, attached is a copy of the letter sent to Betty Hill.

I await your call, good luck.

Attachment 1.

CRIS94

| Court Registry Investment System | | | | | | | |
|---|---|---|---|---|---|---|---|
| For the Perod Ending September 30, 1995 | | | | | | | |
| | | | | | | | |
| | | Number | Percentage | | | | Percentage |
| | | of Cases | to Total | | Balance | | to Total |
| U.S. District Courts | | | | | | | |
| | Southern District of Texas | 792 | | | 53,403,023 | | |
| | Eastern District of Texas | 167 | | | 6,346,451 | | |
| | Middle District of Louisiana | 96 | | | 31,647,773 | | |
| | Southern District of New York | 169 | | | 364,986,769 | | |
| | Eastern District of New York | 25 | | | 11,507,293 | | |
| | District of Arizona | 200 | | | 5,089,608 | | |
| | **District of Alaska** | **1** | | | **117,067,523** | | |
| | District of District of Columbia | 64 | | | 10,729,246 | | |
| | District of Massachusetts | 4 | | | 32,546,994 | | |
| | Eastern District of Kentucky | 50 | | | 2,014,610 | | |
| | District of New Hampshire | 1 | | | 1,811,852 | | |
| | District of Vermont | 2 | | | 596,704 | | |
| | District of South Carolina | 17 | | | 5,736,376 | | |
| | | | | | | | |
| U.S. Bankruptcy Courts | | | | | | | |
| | Southern District of New York | 4 | | | 166,162 | | |
| | Northern District of Texas | 54 | | | 8,312,853 | | |
| | | | | | | | |
| | | | | | | | |
| Total | | 1,646 | 0.06% | | 651,963,237 | | 17.96% |
| | | | | | | | |
| | | | | | | | |
| Investment Income | | | | | | | |
| | Total Reported for CRIS | | | | 26,650,551 | | |
| | Total Reported for Alaska | | | | 5,706,666 | | 21.41% |
| | | | | | | | |
| | | | | | | | |
| Investment Expenses | | | | | | | |
| | Registry Fee Total for CRIS | | | | 2,315,622 | | |
| | Registry Fee Total for Alaska | | | | 586,857 | | 25.34% |

Attachment 1 (cont.)

**STATEMENT 2**

# COURT REGISTRY INVESTMENT SYSTEM
# LIQUIDITY FUND
# STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS ARISING FROM CASH TRANSACTIONS
## September 30, 1995 and 1994

| | 1995 | 1994 |
|---|---|---|
| **CASH RECEIPTS FROM OPERATIONS** | | |
| Investment income | | |
| Interest | $ 26,650,551 | $ 16,981,995 |
| Investment expenses | | |
| Registry fees | (2,315,622) | (1,338,713) |
| Transaction fees | (1,070) | (836) |
| Net investment income | 24,333,859 | 15,642,446 |
| Gain on sale of investments | 104,554 | 46,517 |
| Net increase in assets from operations | 24,438,413 | 15,688,963 |
| **CASH DISTRIBUTIONS TO PARTICIPANTS** | (24,438,413) | (15,688,963) |
| **PARTICIPANT TRANSACTIONS** | | |
| Proceeds from participant additions | 579,548,785 | 414,496,206 |
| Proceeds from reinvestment of cash distributions | 24,438,413 | 15,688,963 |
| Payments for participant withdrawals | (433,848,084) | (536,232,295) |
| Net increase (decrease) from participant transactions | 170,139,114 | (106,047,126) |
| **NET INCREASE (DECREASE) IN NET ASSETS** | 170,139,114 | (106,047,126) |
| **NET ASSETS, BEGINNING** | 481,824,123 | 587,871,249 |
| **NET ASSETS, ENDING** | $ 651,963,237 | $ 481,824,123 |

These financial statements should be read only in connection with the accompanying summary of significant accounting policies and notes to financial statements.

Source: CRIS Audit

Attachment 1 (cont.)

**COURT REGISTRY INVESTMENT SYSTEM**
**LIQUIDITY FUND**
**NOTES TO FINANCIAL STATEMENTS**
**September 30, 1995 and 1994**

## NOTE 5 - PARTICIPATING COURTS

The following is a summary of participating courts at September 30, 1995 and 1994:

| | 1995 | | 1994 | |
|---|---|---|---|---|
| Court | Number of Cases | Balance | Number of Cases | Balance |
| U.S. District Courts | | | | |
| Southern District of Texas | 792 | $ 53,403,023 | 726 | $ 45,403,810 |
| Eastern District of Texas | 167 | 6,346,451 | 176 | 6,213,065 |
| Middle District of Louisiana | 96 | 31,647,773 | 172 | 2,055,0955 |
| Southern District of New York | 169 | 364,986,769 | 155 | 221,112,506 |
| Eastern District of New York | 25 | 11,507,293 | 22 | 11,689,878 |
| District of Arizona | 200 | 5,089,608 | 217 | 3,284,091 |
| District of Alaska | 1 | 117,067,523 | 1 | 134,813,760 |
| District of District of Columbia | 64 | 10,729,246 | 52 | 10,998,694 |
| District of Massachusetts | 4 | 32,546,994 | 1 | 20,038,008 |
| Eastern District of Kentucky | 50 | 2,014,610 | 61 | 4,673,866 |
| District of New Hampshire | 1 | 1,811,852 | 1 | 1,721,008 |
| District of Vermont | 2 | 596,704 | 1 | 75,666 |
| District of South Carolina | 17 | 5,736,376 | - | - |
| U.S. Bankruptcy Courts | | | | |
| Southern District of New York | 4 | 166,162 | 4 | 10,605,766 |
| Northern District of Texas | 54 | 8,312,853 | 55 | 4,788,050 |
| | | $ 651,963,237 | | $ 477,474,123 |

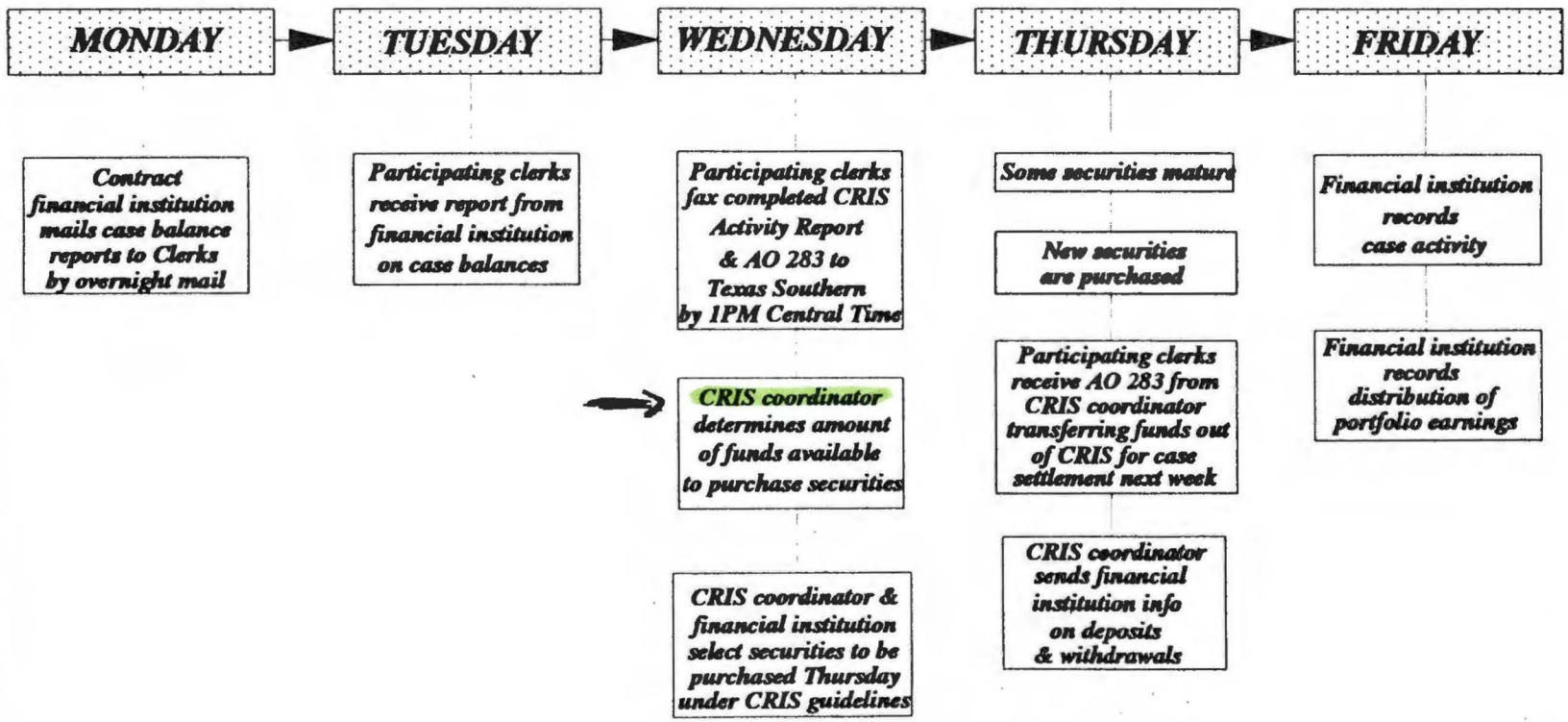
This information is an integral part of the accompanying financial statements.

Source: CRIS Audit

Source: CRIS Manual

Attachment 2

# CRIS WEEKLY CYCLE



| Total Fees | | | | | |
|---|---|---|---|---|---|
| | First | Second | Third | Fourth | Total |
| CRIS/Texas Commerce | 108,369.65 | 82,753.18 | 88,284.87 | 97,940.50 | 377,348.20 |
| Alaska Permanent Capital | 134,377.69 | 93,735.35 | 107,373.05 | 121,748.47 | 457,234.56 |
| Brinson | 243,336.92 | 189,147.14 | 207,330.73 | 226,497.96 | 866,312.74 |
| Stanford B. | 239,296.14 | 171,558.92 | 194,288.41 | 218,247.45 | 823,390.93 |

| Fee Percentage | | | | | |
|---|---|---|---|---|---|
| | First | Second | Third | Fourth | Average |
| CRIS/Texas Commerce | 0.13% | 0.15% | 0.14% | 0.13% | 0.14% |
| Alaska Permanent Capital | 0.16% | 0.17% | 0.17% | 0.16% | 0.16% |
| Brinson | 0.29% | 0.34% | 0.32% | 0.30% | 0.31% |
| Stanford B. | 0.29% | 0.31% | 0.30% | 0.29% | 0.30% |

Attachment 3

Attachment 3 (Cont)

| Alaska Permanent Fund Corporation | | |
|---|---|---|
| Fixed Income Manager Fees | | |
| | | |
| | | |
| Manager | | |
| | | |
| **Alaska Permanent Capital** | | |
| First | 10m | 0.25% |
| Next | 90m | 0.15% |
| Next | 200m | 0.10% |
| Over | 300m | 0.07% |
| | | |
| | | |
| **Brinson** | | |
| First | 10m | 0.50% |
| Next | 15m | 0.35% |
| Next | 25m | 0.30% |
| Over | 50m | 0.20% |
| | | |
| | | |
| **Stanford B.** | | |
| First | 5m | 0.50% |
| Next | 15m | 0.38% |
| Next | 80m | 0.25% |
| Over | 100m | 0.19% |
| | | |
| | | |

Notes: The fee is based on the cumulative fund balance being managed and recognizes the reduced costs associated with larger investment holdings. The fee is calculated on a quarterly basis by adding the beginning balance to the ending balance and then dividing by two. This average fund balance is then applied to the quoted rates.

Va[illegible] Fees

| | Fee at 10% | Earnings | | Fee at 2% | Fee at 3% | Fee at 4% | Fee at 5% | Fee at 6% | Fee at 7% | Fee at 8% | Fee at 9% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| Fiscal Year 1992 | 23,000 | 230,000 | | 4,600 | 6,900 | 9,200 | 11,500 | 13,800 | 16,100 | 18,400 | 20,700 |
| Fiscal Year 1993 | 154,000 | 1,540,000 | | 30,800 | 46,200 | 61,600 | 77,000 | 92,400 | 107,800 | 123,200 | 138,600 |
| Fiscal Year 1994 | 364,000 | 3,640,000 | | 72,800 | 109,200 | 145,600 | 182,000 | 218,400 | 254,800 | 291,200 | 327,600 |
| Fiscal Year 1995 | 586,857 | 5,868,570 | | 117,371 | 176,057 | 234,743 | 293,429 | 352,114 | 410,800 | 469,486 | 528,171 |
| Fiscal Year 1996 | 396,307 | 3,963,070 | | 79,261 | 118,892 | 158,523 | 198,154 | 237,784 | 277,415 | 317,046 | 356,676 |
| Fiscal Year 1997 (1) | 90,099 | 900,990 | | 18,020 | 27,030 | 36,040 | 45,050 | 54,059 | 63,069 | 72,079 | 81,089 |
| | | | | | | | | | | | |
| Total | 1,614,263 | 16,142,630 | | 322,853 | 484,279 | 645,705 | 807,132 | 968,558 | 1,129,984 | 1,291,410 | 1,452,837 |
| | | | | | | | | | | | |
| (1) For the period ending December 31, 1996 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Restoration Calculation: | | | | | | | | | | | |
| | | | | | | | | | | | |
| Paid to Date | 1,614,263 | | | Paid to Date | 1,614,263 | | Paid to Date | 1,614,263 | | | |
| Fee at 2% | 322,853 | | | Fee at 5% | 807,132 | | Fee at 8% | 1,291,410 | | | |
| | 1,291,410 | | | | 807,132 | | | 322,853 | | | |
| | | | | | | | | | | | |
| Paid to Date | 1,614,263 | | | Paid to Date | 1,614,263 | | Paid to Date | 1,614,263 | | | |
| Fee at 3% | 484,279 | | | Fee at 6% | 968,558 | | Fee at 9% | 1,452,837 | | | |
| | 1,129,984 | | | | 645,705 | | | 161,426 | | | |
| | | | | | | | | | | | |
| Paid to Date | 1,614,263 | | | Paid to Date | 1,614,263 | | | | | | |
| Fee at 4% | 645,705 | | | Fee at 7% | 1,129,984 | | | | | | |
| | 968,558 | | | | 484,279 | | | | | | |

Attachment 4

Attachment 4 (cont)

Court Registry Investment System

| Period | Principal | Ending Balance | Net Earnings | Fees at 10% | Gross Earnings | Fees at 2% |
|---|---|---|---|---|---|---|
| 12/28/95 - 1/03/96 | 95,484,047.42 | 107,073,875.42 | 98,809.42 | 10,978.83 | 109,788.25 | 2,195.77 |
| 1/04/96 - 1/10/96 | 95,484,047.42 | 107,172,167.91 | 98,292.49 | 10,921.39 | 109,213.88 | 2,184.28 |
| 1/11/96 - 1/17/96 | 95,484,047.42 | 107,268,978.81 | 96,810.90 | 10,756.77 | 107,567.67 | 2,151.35 |
| 1/18/96 - 1/24/96 | 90,292,925.42 | 102,172,637.03 | 94,780.22 | 10,531.14 | 105,311.36 | 2,106.23 |
| 1/25/96 - 1/31/96 | 90,292,925.42 | 102,266,723.36 | 94,086.33 | 10,454.04 | 104,540.37 | 2,090.81 |
| 2/01/96 - 2/07/96 | 90,292,925.42 | 102,361,509.06 | 94,785.70 | 10,531.75 | 105,317.45 | 2,106.35 |
| 2/08/96 - 2/14/96 | 90,292,925.42 | 102,441,329.67 | 79,820.61 | 8,868.96 | 88,689.57 | 1,773.79 |
| 2/15/96 - 2/21/96 | 54,296,694.64 | 66,499,466.95 | 54,368.06 | 6,040.90 | 60,408.96 | 1,208.18 |
| 2/22/96 - 2/28/96 | 54,296,694.64 | 66,556,052.08 | 56,585.13 | 6,287.24 | 62,872.37 | 1,257.45 |
| 3/01/96 - 3/06/96 | 54,296,694.64 | 66,612,340.57 | 56,288.49 | 6,254.28 | 62,542.77 | 1,250.86 |
| 3/07/96 - 3/13/96 | 54,296,694.64 | 66,665,215.31 | 52,874.74 | 5,874.97 | 58,749.71 | 1,174.99 |
| 3/14/96 - 3/20/96 | 46,296,694.64 | 58,710,395.35 | 45,180.04 | 5,020.00 | 50,200.04 | 1,004.00 |
| 3/21/96 - 3/27/96 | 46,296,694.64 | 58,763,039.74 | 52,644.39 | 5,849.38 | 58,493.77 | 1,169.88 |
| First Quarter Total | | | 975,326.52 | 108,369.65 | 1,083,696.17 | 21,673.92 |
| 3/28/96 - 4/03/96 | 46,296,694.64 | 58,816,915.22 | 53,875.48 | 5,986.17 | 59,861.65 | 1,197.23 |
| 4/04/96 - 4/10/96 | 46,296,694.64 | 58,872,894.35 | 55,979.13 | 6,219.90 | 62,199.03 | 1,243.98 |
| 4/11/96 - 4/17/96 | 46,296,694.64 | 58,924,951.14 | 52,056.79 | 5,784.09 | 57,840.88 | 1,156.82 |
| 4/18/96 - 4/24/96 | 46,296,694.64 | 58,979,375.68 | 54,424.54 | 6,047.17 | 60,471.71 | 1,209.43 |
| 4/25/96 - 5/01/96 | 46,296,694.64 | 59,034,065.60 | 54,689.92 | 6,076.66 | 60,766.58 | 1,215.33 |
| 5/02/96 - 5/08/96 | 46,296,694.64 | 59,075,587.08 | 41,521.48 | 4,613.50 | 46,134.98 | 922.70 |
| 5/09/96 - 5/15/96 | 39,769,194.64 | 52,583,249.02 | 35,161.94 | 3,906.88 | 39,068.82 | 781.38 |
| 5/16/96 - 5/22/96 | 39,769,194.64 | 52,625,639.64 | 42,390.62 | 4,710.07 | 47,100.69 | 942.01 |
| 5/23/96 - 5/29/96 | 39,769,194.64 | 52,662,580.91 | 36,941.27 | 4,104.59 | 41,045.86 | 820.92 |
| 5/30/96 - 6/05/96 | 39,769,194.64 | 52,702,503.77 | 39,922.86 | 4,435.87 | 44,358.73 | 887.17 |
| 6/06/96 - 6/12/96 | 39,769,194.64 | 52,744,613.64 | 42,109.87 | 4,678.88 | 46,788.75 | 935.78 |
| 6/13/96 - 6/19/96 | 39,769,194.64 | 52,786,192.59 | 41,578.95 | 4,619.88 | 46,198.83 | 923.98 |
| 6/20/96 - 6/26/96 | 39,769,194.64 | 52,830,223.93 | 44,031.37 | 4,892.38 | 48,923.75 | 978.48 |
| Second Quarter Total | | | 594,684.22 | 66,076.04 | 660,760.26 | 13,215.21 |
| Period | Principal | Ending Balance | Net Earnings | Fees at 10% | Gross Earnings | Fees at 2% |
| 6/27/96 - 7/04/96 | 39,769,194.64 | 52,872,888.63 | 42,664.67 | 4,740.52 | 47,405.19 | 948.10 |
| 7/05/96 - 7/10/96 | 39,769,194.64 | 52,916,913.02 | 44,024.39 | 4,891.60 | 48,915.99 | 978.32 |
| 7/11/96 - 7/17/96 | 39,769,194.64 | 52,959,779.01 | 42,865.99 | 4,762.89 | 47,628.88 | 952.58 |
| 7/18/96 - 7/24/96 | 39,769,194.64 | 53,003,972.47 | 44,193.46 | 4,910.39 | 49,103.85 | 982.08 |
| 7/25/96 - 7/31/96 | 39,769,194.64 | 53,048,198.79 | 44,226.32 | 4,914.04 | 49,140.36 | 982.81 |
| 8/01/96 - 8/07/96 | 39,769,194.64 | 53,093,242.51 | 45,043.72 | 5,004.86 | 50,048.58 | 1,000.97 |
| 8/08/96 - 8/14/96 | 39,769,194.64 | 53,136,731.12 | 43,488.61 | 4,832.07 | 48,320.68 | 966.41 |
| 8/15/96 - 8/21/96 | 39,769,194.64 | 53,182,074.55 | 45,343.43 | 5,038.16 | 50,381.59 | 1,007.63 |
| 8/22/96 - 8/28/96 | 39,769,194.64 | 53,229,130.21 | 47,055.66 | 5,228.41 | 52,284.07 | 1,045.68 |
| 8/29/96 - 9/04/96 | 39,769,194.64 | 53,276,498.74 | 47,368.53 | 5,263.17 | 52,631.70 | 1,052.63 |
| 9/05/96 - 9/11/96 | 106,477,748.64 | 120,087,214.11 | 102,161.37 | 11,351.26 | 113,512.63 | 2,270.25 |
| 9/12/96 - 9/18/96 | 106,477,748.64 | 120,195,332.82 | 108,118.71 | 12,013.19 | 120,131.90 | 2,402.64 |
| 9/19/96 - 9/25/96 | 63,102,263.64 | 76,889,483.55 | 69,635.73 | 7,739.30 | 77,375.03 | 1,547.50 |
| 9/26/96 - 10/02/96 | 63,102,263.64 | 76,957,838.60 | 68,355.05 | 7,595.01 | 75,950.06 | 1,519.00 |
| Third Quarter Total | | | 794,545.64 | 88,284.87 | 882,830.51 | 17,656.61 |
| 10/03/96 - 10/09/96 | 63,102,263.64 | 77,024,280.65 | 66,442.05 | 7,382.45 | 73,824.50 | 1,476.49 |
| 10/10/96 - 10/16/96 | 63,102,263.64 | 77,088,990.62 | 64,709.97 | 7,190.00 | 71,899.97 | 1,438.00 |
| 10/17/96 - 10/23/96 | 63,102,263.64 | 77,157,145.28 | 68,154.66 | 7,572.74 | 75,727.40 | 1,514.55 |
| 10/24/96 - 10/30/96 | 63,102,263.64 | 77,226,043.30 | 68,898.02 | 7,655.34 | 76,553.36 | 1,531.07 |
| 10/31/96 - 11/06/96 | 60,488,763.64 | 74,679,387.05 | 66,843.75 | 7,427.08 | 74,270.83 | 1,485.42 |
| 11/07/96 - 11/13/96 | 60,488,763.64 | 74,745,606.68 | 66,219.63 | 7,357.74 | 73,577.37 | 1,471.55 |
| 11/14/96 - 11/20/96 | 60,488,763.64 | 74,813,626.67 | 68,019.99 | 7,557.78 | 75,577.77 | 1,511.56 |
| 11/21/96 - 11/28/96 | 57,236,638.64 | 71,628,198.31 | 66,696.64 | 7,410.74 | 74,107.38 | 1,482.15 |
| 11/29/96 - 12/04/96 | 57,236,638.64 | 71,669,412.74 | 71,214.43 | 7,912.71 | 79,127.14 | 1,582.54 |
| 12/05/96 - 12/11/96 | 57,236,638.64 | 71,767,255.06 | 67,842.32 | 7,538.04 | 75,380.36 | 1,507.61 |
| 12/12/96 - 12/18/96 | 57,236,638.64 | 71,835,147.54 | 67,892.48 | 7,543.61 | 75,436.09 | 1,508.72 |
| 12/19/96 - 12/25/96 | 57,236,638.64 | 71,903,107.93 | 67,960.39 | 7,551.16 | 75,511.55 | 1,510.23 |
| 12/26/96 - 01/01/97 | 57,236,638.64 | 71,973,677.89 | 70,569.96 | 7,841.11 | 78,411.07 | 1,568.22 |
| Forth Quarter Total | | | 881,464.29 | 97,940.50 | 979,404.79 | 19,588.10 |
| Annual Total | | | 3,246,020.67 | 360,671.06 | 3,606,691.73 | 72,133.83 |

Attachment 5

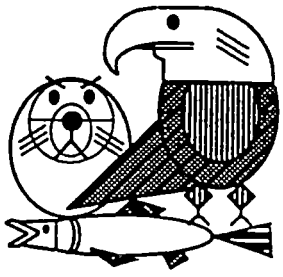
Transfers

| | Date | United States | State of Alaska | Court Request Total |
|---|---|---|---|---|
| | | | | |
| Court Request 1 | June 1992 | 6,320,500 | 6,559,200 | 12,879,700 |
| | | | | |
| Total Fiscal Year 1992 | | 6,320,500 | 6,559,200 | 12,879,700 |
| | | | | |
| Court Request 2 | January 1993 | 3,074,029 | 3,493,225 | 6,567,254 |
| Court Request 3 | June 1993 | 6,031,852 | 15,035,888 | 21,067,740 |
| | | | | |
| Total Fiscal Year 1993 | | 9,105,881 | 18,529,113 | 27,634,994 |
| | | | | |
| Court Request 4 | November 1993 | | 29,950,000 | 29,950,000 |
| Court Request 5 | December 1993 | 2,516,069 | 2,227,856 | 4,743,925 |
| Court Request 6 | June 1994 | 1,407,818 | 12,211,164 | 13,618,982 |
| Court Request 7 | June 1994 | 2,084,500 | 157,246 | 2,241,746 |
| | | | | |
| Total Fiscal Year 1994 | | 6,008,387 | 44,546,266 | 50,554,653 |
| | | | | |
| Court Request 8 | October 1994 | 3,576,179 | 7,088,077 | 10,664,256 |
| Court Request 9 | November 1994 | 3,226,182 | 3,111,204 | 6,337,386 |
| Court Request 10 | November 1994 | | 9,234,909 | 9,234,909 |
| Court Request 11 | January 1995 | 1,450,000 | | 1,450,000 |
| Court Request 12 | April 1995 | 17,200,000 | | 17,200,000 |
| Court Request 13 | May 1995 | 1,480,251 | 171,763 | 1,652,014 |
| Court Request 14 | August 1995 | 15,250,000 | | 15,250,000 |
| Court Request 15 | September 1995 | 5,837,316 | 9,863,716 | 15,701,032 |
| Court Request 16 | September 1995 | | 12,500,000 | 12,500,000 |
| | | | | |
| Total Fiscal Year 1995 | | 48,019,928 | 41,969,669 | 89,989,597 |
| | | | | |
| Court Request 17 | November 1995 | | 3,294,667 | 3,294,667 |
| Court Request 18 | November 1995 | 8,000,000 | | 8,000,000 |
| Court Request 19 | January 1996 | 3,222,224 | 1,968,898 | 5,191,122 |
| Court Request 20 | March 1996 | | 8,000,000 | 8,000,000 |
| Court Request 21 | May 1996 | 1,007,000 | 5,520,500 | 6,527,500 |
| Court Request 22 | September 1996 | 18,818,600 | 24,556,885 | 43,375,485 |
| | | | | |
| Total Fiscal Year 1996 | | 31,047,824 | 43,340,950 | 74,388,774 |
| | | | | |
| Court Request 23 | | 2,613,500 | 0 | 2,613,500 |
| Court Request 24 | | 176,500 | 3,075,625 | 3,252,125 |
| Court Request 25 | | 785,859 | 442,833 | 1,228,692 |
| | | | | |
| Total Fiscal Year 1997 | | 3,575,859 | 3,518,458 | 7,094,317 |
| | | | | |
| **Total** | | **104,078,379** | **158,463,656** | **262,542,035** |
| | | | | |
| Percentage to Total | | 39.64% | 60.36% | 100.00% |
| | | | | |
| Porprotion of Fees as of 12/31/96 | | 639,936 | 974,328 | 1,614,264 |

Attachment 6


# *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**

September 25, 1996

Betty Hill
Office of the Clerk
United States District Court for the District of Alaska
222 West Seventh Avenue
Anchorage, Alaska 99513

Dear Ms. Hill:

In accordance with the Amended Order for Deposit and Transfer of Settlement Proceeds (Order), dated July 31, 1995, all money paid in relationship to United States v. Exxon Corporation, et al., No. A91-082 CIV, and State of Alaska v. Exxon Corporation , et al., A91-083 CIV, is placed in the Court Registry Investment System (CRIS) administered through the United States District Court for the Southern District of Texas.

Pursuant to the Order, all payments in connection with the *Exxon Valdez* Oil Spill Settlement are transferred to the Court electronically. The Order specifies that disbursements of settlement proceeds from the Registry of the Court are made upon joint application of counsel for the United States and the State of Alaska. However, the Order is silent regarding the method of disbursement.

Currently, when disbursements are made, the Court Clerk in Houston electronically transfers the appropriate amount to the Court Clerk in Anchorage. The Court Clerk in Anchorage then issues checks, as stipulated in the Joint Applications for Disbursement. Between the time that the funds are liquidated in CRIS and the checks are deposited in the interest-bearing trust funds maintained by the Governments, the funds are not earning interest.

It is estimated that, as a result of this time-lag, $95,000 in interest was lost during fiscal 1995. As described in the attached letter, this estimate was developed by the firm of Elgee, Rehfeld and Funk. The letter also states that the Anchorage Court Clerk does not have the ability to wire transfer funds. However, the Houston Court Clerk does.

Based on the inability of the Anchorage Court Clerk to wire transfer funds, an alternative approach is outlined in the letter from Elgee, Rehfeld and Funk. Under this approach,

after receipt of a voucher from the Anchorage Court Clerk, the Houston Court Clerk would wire transfer the funds directly to the Governments.

It is estimated that the wire transfer could reduce the lag time between liquidation at CRIS and reinvestment in the interest-bearing trust funds maintained by the Governments from seven days to one or two days. Using the Joint Applications for the twenty second disbursement as an example, this means that only $11,884 in interest would be lost, rather than $41,593.

Your assistance is requested to determine the current ability of the Anchorage Court Clerk to wire transfer funds. In addition, your analysis is requested regarding the alternative approach outlined in the attached letter from Elgee, Rehfeld and Funk.

If you have any questions regarding this letter, please do not hesitate to call me.

Sincerely,

Molly McCammon

Molly McCammon
Executive Director

cc: Craig Tillery, Alaska Department of Law
Gina Belt, U.S. Department of Justice

mm/raw

Loss earnings 41,593
- 11,884
29,709

# *Exxon Valdez* Oil Spill Trustee Council

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


## MEMORANDUM

**To:** Nick Dudiak, Geoff Coble, and Mark Dickson

**From:** Stan Senner, Science Coordinator

**Subject:** Restoration Workshop

**Date:** February 10, 1997

---

Things are just returning to normal (whatever that is) after the 1997 Restoration Workshop, so I have been slow to let you know how much I enjoyed your talk on the Port Dick project (\139A2). On the surface, the project sounds very simple, but you did a great job of describing the many technical and environmental factors that must be considered and addressed. Several other people made the same comment to me. Good job.

cc: Molly McCammon
Claudia Slater

# *Exxon Valdez* Oil Spill Trustee Council

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

## FAX COVER SHEET

To: Restoration Work Force

From: Joe Hunt Date: 2/6/97

Comments: Total Pages: 4

Attached is the DRAFT copy of science highlights prepared for the Annual Report. Please take a look at the copy and get back to me with any concerns, corrections, questions, etc. You can fax back edited copy or give me a call. Deadline is Wednesday, Feb 12.

Thanks!

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
C. Slater/B. Hauser/J. Sullivan
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Fay, Ginny
Rice, Bud
Spies, Bob
Holbrook, Ken
Wright, Bruce

HARD COPY TO FOLLOW _____ FAX SENT BY: Kim

1/10/97

## Science Highlights

### Herring Pound

Samples from Sitka Sound have shown that a significant number of Pacific herring held in pens begin showing signs of the same deadly and contagious virus (VHSV) associated with the 1993 collapse of the herring fishery in Prince William Sound. The study simulated the spawn-on-kelp pound fishery in which tons of herring are trapped in pens to lay their eggs on a limited supply of kelp.

Stress is considered one possible factor in the emergence of the virus. One Council-funded study showed that within 48 hours of capture 15-20 percent of the herring were shedding significant amounts of virus into the water. Researchers believe that such a high prevalence of VHSV in herring could be a serious threat to the fishery.

As a result, fishery managers in Prince William Sound are encouraging herring pounders to switch to open pounding, which allows the herring to swim in and out of the pound at will. Pounders choosing this option will be allowed about one-third more kelp than those using closed pounds. In addition, researchers will study the herring from closed pounds for signs of stress and then sell the fish to help offset costs of the project.

### Forage Fish

Black-legged kittiwakes and tufted puffins raised in captivity showed how diets of high-quality forage fish offer the seabirds a better chance of survival when compared to diets of low-quality fish such as walleye pollock. This research supports the theory that a reduction in fat-rich capelin, sand lance, and herring may have contributed to pre-spill declines and the lack of recovery of some seabirds, including pigeon guillemots and marbled murrelets. Capelin and sand lance are considered rich in fats and therefore highly nutritious, while juvenile pollock represent the forage fish equivalent of junkfood.

Tests showed that the fat content of sand lance and capelin is 2-3 times higher than that of pollock. The nestling seabirds had to be fed nearly twice as much pollock to equal the same caloric intake as a diet of capelin. Differences in body mass gain suggest that nestlings raised on pollock may go to sea with inadequate energy reserves and that avian predators must expend more energy and catch more prey to meet the energy requirements of their offspring.

### Pink Salmon Oil Injuries

Elevated embryo mortalities were observed for pink salmon embryos originating from oil-contaminated streams during the first five years following the oil spill. No statistical differences have been observed since 1994. Research data suggest that the elevated mortalities observed in 1989 and 1990 were due to direct exposure of oil while those observed in 1991-1993 may

be caused by a combination of continued oil exposure and parental effects. Lack of a significant difference in 1994, 1995, and 1996 between oil contaminated and non-oiled streams demonstrates recovery is underway in wild pink salmon populations.

**Pristane**

A naturally-occurring hydrocarbon may one day help fisheries managers predict the health of the annual pink salmon return to Prince William Sound. The hydrocarbon, known as pristane, is produced by neocalanus copepods, a favorite food of emerging salmon fry. The pristane passes through the salmon and settles as fecal material on mussel beds. By testing the level of pristane in mussels, researchers believe they can determine whether the pink fry had enough food to improve their chances of survival. This theory will be tested when pinks return to spawn in 1997. The "pristane production index" for 1996 was down by one-third from 1995, suggesting a lower return of pink salmon in 1997. Chugach School District students participating in the Council-funded Youth Area Watch got hands-on experience collecting and analyzing samples for this project.

**Port Dick Creek Restoration**

Port Dick Creek, located on the southern shore of the Kenai Peninsula approximately 25 miles from Homer, has the potential to be a strong producer of pink and chum salmon. Uplift from the 1964 earthquake reduced the depth of the water and limited the amount of spawning habitat. After four years of studying water levels, the stream was excavated in 1996 using heavy equipment barged to the site. More than 3,000 cubic yards of material was removed to establish a stable water source and create additional spawning habitat. During its first year 572 pinks and 300 chum salmon entered the newly opened tributaries and spawned, generating a projected contribution of more than 11,600 adults beginning in 1998. Dolly Varden and juvenile coho also have been observed using the new habitat. Port Dick was exposed to moderate to heavy oiling during the *Exxon Valdez* spill.

**Killer Whales**

Analysis of blubber taken from killer whales has shown that transient whales have contaminant levels more than 10 times higher than resident killer whales of Prince William Sound and the Gulf of Alaska. Transients travel in and out of the sound and are known to prey mostly on marine mammals, while residents usually remain close to home and prey primarily on fish. The contaminant levels could represent a classic case of bio-magnification. Calves had especially high levels of contaminants, indicating that contaminants are being passed from mother to offspring. Concentrations of chlorobyphenyls and chlorinated pesticides varied depending on age, sex and reproductive status.

In addition, researchers were able to show during 1996 that transient whales and resident whales are genetically different.

**Harlequin Ducks**

After capturing and tracking more than 700 harlequin ducks, researchers were able to determine that winter survival for adult females differed significantly when comparing oiled to unoiled areas. Research during the winter of '95-'96 showed that 94 percent of the females survived in unoiled areas compared to 77 percent survival in oiled areas of Prince William Sound. Over time, in the absence of immigration, this could result in significant reduction of harlequin ducks in western Prince William Sound.

Oil exposure does not appear to be occurring during the molt and blood chemistry and other indicators were similar at oiled and unoiled sites. The contrasting survival rates could be due to local differences such as habitat, available food or predation.

**Solf Lake**

Researchers determined in 1996 that Solf Lake near Herring Bay on Knight Island has the zooplankton biomass to support a population of sockeye salmon. Stocking of this lake, which currently is used only by resident Dolly Varden, is scheduled to begin in 1998. This project is designed to benefit subsistence users, particularly the residents of Chenega Bay. Habitat improvements to the lake's outlet were made nearly 20 years ago to provide access for anadromous fish, but were never maintained. Based on available spawning area, it's estimated the lake can sustain a run of approximately 10,000 sockeye. About 4,500 sockeye would be required to fully seed the system each year, leaving a harvest of 5,500 for local subsistence users.

**Fish Energetics**

Starvation may be a key factor for young herring trying to survive their first winter. Researchers have determined that juvenile herring fast throughout the winter, requiring large energy reserves going into the winter months. The availability in late summer and fall of food to prepare for the fast could limit survival of new herring. There was concern that many recruits did nt have enough reserves to make it through the 1995-96 winter.

Researchers are raising herring in captivity to better quantify the energy needed to survive the winter fast. This is being compared to periodic sampling to determine the nutritional status of fish in nature.

# *Exxon Valdez* Oil Spill Trustee Council

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


February 6, 1997

Honorable Mike Miller
President of the Senate
Alaska State Legislature
State Capitol
Juneau, Alaska 99801-1182

Dear Senator Miller:

After the March 24, 1989 *Exxon Valdez* oil spill, a Trustee Council was created (three State of Alaska and three Federal representatives) to oversee a 10-year program to restore impacted resources and services. The Trustee Council, in turn, established the *Exxon Valdez* Oil Spill Public Advisory Group (PAG) to advise the Trustee Council and make recommendations on program activities and funding (see attached membership list).

The Trustee Council has designated non-voting *ex-officio* seats on the Public Advisory Group for a representative from both the Alaska State Senate and the State House of Representatives. Public Advisory Group members are appointed for a period of two years. session. The current Senate member is Georgianna Lincoln.

The current *ex-officio* members from the State Legislature were appointed last session. Since a new legislature has been convened since those appointments, the Trustee Council thought it would be appropriate to ask if the Senate wishes to retain the current *ex-officio* member or appoint a new one.

If you have any questions, please do not hesitate to contact me. Thank you.

Sincerely,

Molly McCammon

Molly McCammon
Executive Director


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

**State Trustees**
Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

# 1996-1998 Public Advisory Group Selections

| | | |
|---|---|---|
| Mary McBurney | Anchorage | Aquaculture |
| Torie Baker | Cordova | Commercial Fishing |
| Eleanore Huffines | Palmer | Commercial Tourism |
| Chip Dennerlein | Anchorage | Conservation |
| Pam Brodie | Homer | Environmental |
| Howard Valley | Kodiak | Forest Products |
| Dave Cobb | Valdez | Local Government |
| Chuck Totemoff | Anchorage | Native Landowner |
| Stacey Studebaker | Kodiak | Recreation User |
| Rupert Andrews | Juneau | Sport Hunt/Fish |
| Nancy Yeaton | Nanwalek | Subsistence |
| Chuck Meacham | Juneau | Science/Academic |
| Chris Beck | Anchorage | Public at Large |
| Sheri Buretta | Anchorage | " |
| Jim King | Juneau | " |
| Vern McCorkle | Anchorage | " |
| Brenda Schwantes | Kodiak | " |

# *Exxon Valdez* Oil Spill Trustee Council

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

February 6, 1997

Honorable Gail Phillips
Speaker of the House of Representatives
Alaska State Legislature
State Capitol
Juneau, Alaska 99801-1182

Dear Representative Phillips:

After the March 24, 1989 *Exxon Valdez* oil spill, a Trustee Council was created (three State of Alaska and three Federal representatives) to oversee a 10-year program to restore impacted resources and services. The Trustee Council, in turn, established the *Exxon Valdez* Oil Spill Public Advisory Group (PAG) to advise the Trustee Council and make recommendations on program activities and funding (see attached membership list).

The Trustee Council has designated non-voting *ex-officio* seats on the Public Advisory Group for a representative from both the Alaska State Senate and the State House of Representatives. Public Advisory Group members are appointed for a period of two years. The current House member is Alan Austerman.

The current *ex-officio* members from the State Legislature were appointed last session. Since a new legislature has been convened since those appointments, the Trustee Council thought it would be appropriate to ask if the House wishes to retain the current *ex-officio* member or appoint a new one.

If you have any questions, please do not hesitate to contact me. Thank you.

Sincerely,

Molly McCammon
Executive Director

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

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Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

# 1996-1998 Public Advisory Group Selections

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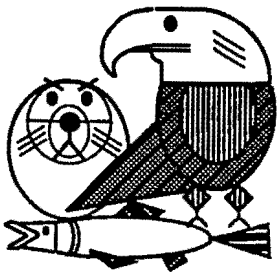
| Pam Brodie | Homer | Environmental |
| Howard Valley | Kodiak | Forest Products |
| Dave Cobb | Valdez | Local Government |
| Chuck Totemoff | Anchorage | Native Landowner |
| Stacey Studebaker | Kodiak | Recreation User |
| Rupert Andrews | Juneau | Sport Hunt/Fish |
| Nancy Yeaton | Nanwalek | Subsistence |
| Chuck Meacham | Juneau | Science/Academic |
| Chris Beck | Anchorage | Public at Large |
| Sheri Buretta | Anchorage | " |
| Jim King | Juneau | " |
| Vern McCorkle | Anchorage | " |
| Brenda Schwantes | Kodiak | " |

**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: Dan Esler, Biological Resources Division, USGS
Kathy Kuletz, U.S. Fish and Wildlife Service
Craig Matkin, North Gulf Oceanic Society
Lisa Seeb, Alaska Department of Fish and Game
Kate Wynne, University of Alaska
Carmen Young, Qutekcak Shellfish Hatchery

FROM: Molly McCammon
Executive Director

RE: THANK YOU

DATE: February 6, 1997

Thank all of you for your wonderful presentations at the public session of the Annual Restoration Workshop. I realize that a Saturday presentation meant going "above and beyond," and I admire the commitment to the restoration process and to your research in particular that your participation represents.

The public session was so well attended and so well received that we are tentatively planning on a Saturday public session again next year. While I expect that we will be asking different PIs to contribute next year, I would appreciate any suggestions or feedback you might have based on your experience this year. (We'll definitely have more cookies and punch on hand!)

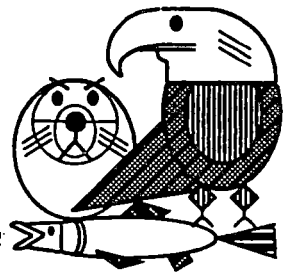
Again, thanks for helping create a very positive finale to this year's workshop.

Dan -
The radio transmitter signals were an especially nice touch. Great job.
Molly

cc: Trustee Council

# *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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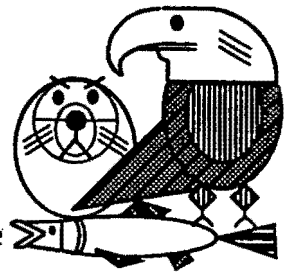
Again, thanks for helping create a very positive finale to this year's workshop.

Kathy -
The recorded bird calls and tree climbing demo were especially nice touches. You did a great job.
Molly

cc: Trustee Council

**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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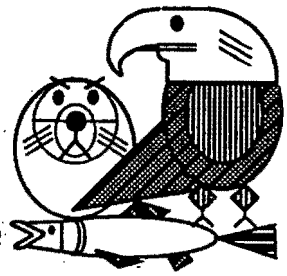
Again, thanks for helping create a very positive finale to this year's workshop.

Craig -
The slides and your overall presentation were outstanding! A big hit with the public.
Molly

cc: Trustee Council

**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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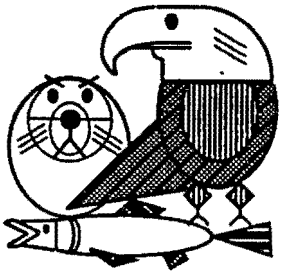
Again, thanks for helping create a very positive finale to this year's workshop.

Lisa -
Great job on presenting a very technical subject in an interesting fashion!
Molly

cc: Trustee Council

**_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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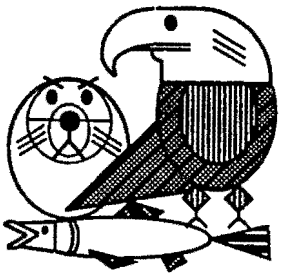
Again, thanks for helping create a very positive finale to this year's workshop.

Kate -
You did a great job on your presentation.
Molly

cc: Trustee Council

**_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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Lisa Seeb, Alaska Department of Fish and Game
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Again, thanks for helping create a very positive finale to this year's workshop.

Carmen – Slides and your presentation were very well done!
Molly

cc: Trustee Council

# *Exxon Valdez* Oil Spill Trustee Council

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


## FAX COVER SHEET

FAXED

To: Catherine Berg Number:

From: M McCammon Date: February 6, 1996

Comments: Total Pages: 2

HARD COPY TO FOLLOW Mailed to Kathy Kuletz

Document Sent By: Kim


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

**State Trustees**
Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

**********
*** ACTIVITY REPORT ***
**********

TRANSMISSION OK

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| CONNECTION TEL | 7863350 |
| CONNECTION ID | C.BERG |
| START TIME | 02/06 16:40 |
| USAGE TIME | 00'55 |
| PAGES | 2 |
| RESULT | OK |

# *Exxon Valdez* Oil Spill Trustee Council

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

## FAX COVER SHEET

FAXED

To: Lisa Thomas Number:

From: M McCammon Date: February 6, 1996

Comments: Total Pages: 2

HARD COPY TO FOLLOW Mailed to Dan

Document Sent By: Keri

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

**State Trustees**
Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

**********
*** ACTIVITY REPORT ***
**********

TRANSMISSION OK

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| TX/RX NO. | 2137 |
| CONNECTION TEL | 7863636 |
| CONNECTION ID | L.THOMAS |
| START TIME | 02/06 16:39 |
| USAGE TIME | 00'55 |
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| RESULT | OK |

# *Exxon Valdez* Oil Spill Trustee Council

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

## FAX COVER SHEET

FAXED

To: Claudia Slater Number:

From: M McCammon Date: February 6, 1997

Comments: Total Pages: 2

HARD COPY TO FOLLOW Mailed to Lisa

Document Sent By: Keri

# *Exxon Valdez* Oil Spill Trustee Council

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


## MEMORANDUM

**To:** Jim Balsiger, National Marine Fisheries Service
James Brady, Alaska Department of Fish and Game
John Dorio, U.S. Forest Service
John Martin, U.S. Fish and Wildlife Service

**From:** Molly McCammon, Executive Director

**Date:** February 6, 1997

**Subject:** Management Panel at the 1997 Restoration Workshop

---

Thank you for your participation in the panel on "Perspectives on Ecosystem Projects and Research Needed by Resource Managers" at the recent Restoration Workshop. I appreciated your willingness to attend the meeting and to share your views with EVOS investigators and the public. I thought your comments on agency missions and practical needs provided a useful "real world" dimension to the workshop. In the end, if the results of the various restoration studies are not translated into improved management and conservation, the program will not have realized its potential.

I hope you will take time to participate in more EVOS events. If you have concerns along the way, or have suggestions about projects or ways for the restoration program to be more closely coupled with management needs, please let me or Stan Senner know. Thank you again.

cc: Trustee Council
Agency Liaisons

# *Exxon Valdez* Oil Spill Trustee Council

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

## FAX COVER SHEET

FAXED

To: Alex Wilson Number:

From: M McCammon Date: Feb 6, 1997

Comments: Total Pages: 2

To:

Jim Balsiger 206-526-4004

James Brady 267-2442

John Davis 783-2094 ~~786-3242~~

John Martin 907-235-7783

HARD COPY TO FOLLOW _____

Document Sent By: Keri Dile

**********
*** MULTI TRANSACTION REPORT ***
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INCOMPLETE TX/RX ~~7863242~~ 783-2094

TRANSACTION OK 12065264004

2672442

19072357783

ERROR

**********
*** ACTIVITY REPORT ***
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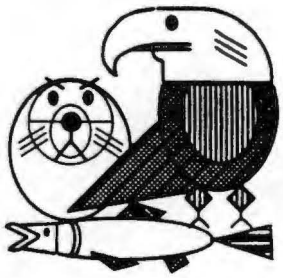
| START TIME | 02/06 15:43 | |
| USAGE TIME | 00'54 | |
| PAGES | 2 | |
| RESULT | OK | |

**_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**



# FAX COVER SHEET

To: Trustee Council Members

From: Molly McCammon Date: Feb 16, 1996 FAXED

Comments: Total Pages: 2

Please deliver ASAP
Thanks

**TRUSTEE COUNCIL MEMBERS AND ALTERNATES:**

Botelho, Bruce
Brown, Michele
Frampton, Jr., George T.
Janik, Phil
Pennoyer, Steve
Rue, Frank
Tillery, Craig
Bosworth, Rob
Williams, Deborah
Wolfe, Jim
Collinsworth, Don

HARD COPY TO FOLLOW _____

FAX SENT BY: Kris Hile

3/27/96

**********
*** MULTI TRANSACTION REPORT ***
**********

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| | [ 26] 19074652075 | B.BOTELHO |
| | [ 27] 12022084684 | G.FRAMPTON |
| | [ 28] 19075867249 | S.PENNOYER |
| | [ 29] 19074652332 | FRANK RUE |
| | [ 31] 19074655070 | BROWN-FAY |
| | [ 36] 2787022 | ALEX-CRAIG |
| | [ 37] 2714102 | D.WILLIAMS |

ERROR

# *Exxon Valdez* Oil Spill Trustee Council

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

## FAX COVER SHEET

FAXED

To: Agency Liaisons

From: M McCammon Date: Feb 12, 1996

Comments: Total Pages: 2

AGENCY LIAISON MEMBERS INCLUDE:

| | | |
|---|---|---|
| Berg, Catherine | Morris, Byron | Slater, Claudia |
| Gibbons, Dave | Spies, Bob | Fries, Carol |
| Christman, Veronica | Fay, Ginny | Rice, Bud |

HARD COPY TO FOLLOW_____

Document Sent By: Ken Adler

1/10/97

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

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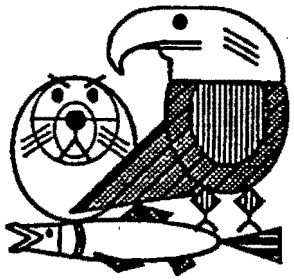
| | [ 13] 19077896608 | MORRIS-WRIGHT |
| | [ 15] 2698918 | CAROL FRIES |
| | [ 18] 2672464 | SULLIVAN-SLATER |
| | [ 20] 7863350 | C.BERG |
| | [ 21] 2572517 | B.RICE |
| | [ 31] 19074655070 | BROWN-FAY |
| | [ 35] 15103737834 | B.SPIES |
| ERROR | | |

**_Exxon Valdez_ Oil Spill Trustee Council**
Restoration Office
645 G Street, Suite 401, Anchorage, AK 99501-3451
907-278-8012 Fax: 907-276-7178



# MEMORANDUM

**TO:** Agency Liaisons

**FROM:** Traci Cramer
Traci Cramer
Administrative Officer

**DATE:** February 6, 1997

**RE:** Internal Control and Operating Comments

---

Attached are the Draft Internal Control and Operating Comments developed by the audit firm of Elgee, Rehfeld and Funk for the Fiscal Year ending September 30, 1996. Each agency is requested to respond to those comments specific to their agency. Consistent with the prior year's audit, the agency response will be incorporated into the final report.

In order to be incorporated in the annual report, the auditors have requested that all original responses be received no later than close of business Friday, February 21, 1997. To facilitate this time-line, it is requested that those agencies located in Anchorage deliver their respective responses to the Anchorage Restoration Office by noon Thursday, February 20, 1997. For those agencies located in Juneau, it is requested that the response be delivered to the Juneau Restoration Office by noon, Friday, February 21, 1997.

As was the case last year, the Restoration Office will respond to the General Comments. Before the response is finalized, a draft will be circulated for review and comment.

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

attachment

CC: Molly McCammon
Robert Baldauf
Kim Garnero

# *Exxon Valdez* Oil Spill Trustee Council

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


February 5, 1997

Debra Barringer Elliott
P.O. Box 1555
Cordova, Alaska 99574

Dear Debra:

It was a pleasure to meet you at the public meeting on archaeological resource restoration in Cordova on January 30. Enclosed is a copy of the final report for Project 96154, *Comprehensive Community Plan for the Restoration of Archaeological Resources in Prince William Sound and Lower Cook Inlet*, as you requested.

If you have any questions, comments or concerns about the report or the issues discussed at the meeting, please let me know. To comment, contact me by:


**Mail:** *Exxon Valdez* Oil Spill Trustee Council
645 G Street; Suite 401
Anchorage, AK 99501
**Phone:** (907) 278-8012
Toll free in Alaska: 1-800-478-7745; outside Alaska: 1-800-283-7745
**Fax:** (907) 276-7178
**E-mail:** veronicac@oilspill.state.ak.us (Attn: Veronica Christman)


Thank you for your interest in the restoration program.

Sincerely,

Veronica Christman

Veronica Christman
Natural Resource Manager

Enclosure

# *Exxon Valdez* Oil Spill Trustee Council

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

## MEMORANDUM

**To:** All FY 96 and FY 97 Principal Investigators and Project Managers

**From:** Molly McCammon, Executive Director

**Date:** February 6, 1997

**Subject:** Updated Report Writing Procedures, New Data Destruction Policy

---

Thank you all for your participation in the 1997 Restoration Workshop. We learned a great deal and appreciate your preparations for the workshop and your hard work over the last year. The results of your effort were evident in the talks and posters at the workshop, and there were many positive comments about their quality.

Two items are enclosed for your guidance in 1997:

1. **Updated report writing procedures.** For the most part, the changes simply clarify or more accurately describe current practices. However, please take special note of page 3, which provides that project reports include a summary of the types of data collected during the project, and page 8, which provides guidelines for the use of manuscripts to meet reporting requirements.

Remember that project reports (both annual and final) must be submitted by April 15, unless otherwise provided in your DPD or contract. An extension of this due date requires the approval of the Executive Director. Please work with your lead agency to submit your report or request an extension.

2. **Disposition of spill samples**. There is a new court order concerning destruction of samples (e.g, oil, water, tar, sediments, etc.) obtained in connection with the spill. The order provides for the destruction of unneeded samples, subject to several limitations. **If you have samples that you want to destroy, please contact the science coordinator, Stan Senner (E-mail: stans@oilspill.state.ak.us), before taking any action.** Stan will help make sure that the appropriate procedure is followed and check with the agency liaisons to make sure that no other investigator or agency has any need of the samples you wish to destroy.

Finally, the *Invitation to Submit Restoration Proposals for FY 1998* will be mailed on February 15. As was the case last year, proposals for FY 98 funding are due April 15. Please remember that DPDs must be submitted for all proposed projects, including both new and continuing projects.

Thank you again for your participation in the 1997 Restoration Workshop.

encl: (2)

cc: Agency Liaisons and Restoration Work Force
Legal Team

cc: Restoration Work Force

RECEIVED
AFTER 4:30 P.M.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ALASKA

Lodged
SEP 27 1996

| | |
|---|---|
| In re | ) |
| | ) Case No. A89-095-CV (HRH) |
| THE EXXON VALDEZ | ) (Consolidated) |
| | ) |
| THIS DOCUMENT RELATES TO ALL CASES | ) |
| | ) |

FILED
OCT 01 1996
UNITED STATES DISTRICT COURT
DISTRICT OF ALASKA
By _____ Dep

~~[PROPOSED]~~ ORDER
RE DISPOSITION OF CERTAIN SPILL SAMPLES

The United States and the State of Alaska ("Governments") and their contractors or agents have acquired certain scientific samples in connection with the 1989 Exxon Valdez Oil Spill. These samples consist of oil, water, tar, sediments, carcasses, tissue and other biota and the extracts of such samples remaining after analysis ("Spill Samples").

The Court hereby orders that, beginning on the date of entry of this Order, the Governments and/or their contractors or agents may destroy or otherwise dispose of Spill Samples in their custody, subject to the following terms:

1. Any analysis of Spill Samples that was not included with the NOAA Hydrocarbon Database "PWSOIL" provided to Exxon through A.E. Bence in 1993 may not be relied upon in future court proceedings against Exxon arising out of the Exxon Valdez Oil Spill, except that an analysis of a Spill Sample not included in that database may be used in such proceedings if all analyses of that Spill Sample are provided to Liaison



6918

Counsel for the plaintiffs and defendants and the Parties are given 60 days thereafter before destruction of the Spill Sample to take custody thereof.

2. The State of Alaska shall provide to Liaison Counsel for Exxon, Alyeska and Private Plaintiffs good quality copies of existing indices, lists or databases that include the Spill Samples held in the Department of Environmental Conservation's Juneau Laboratory ("ADEC laboratory") which are to be destroyed by the State of Alaska or existing indices, lists or databases that correlate the ADEC laboratory Spill Sample identification numbers to other identification numbers, e.g., investigator identification numbers. The parties understand that such indices, lists or databases do not exist for all of the Spill Samples at the ADEC laboratory that will be destroyed by the State of Alaska.

3. The United States shall provide to Liaison Counsel for Exxon, Alyeska and the Private Plaintiffs identification of samples which are to be destroyed including, but not limited to, the 1993 PWSOIL ID numbers of the samples, if applicable.

IT IS SO ORDERED.

Dated: 9/30/96

H. Russel Holland
United States District Judge

A89-0095--CV (HRH)

D. RUSKIN
D. SERDAHELY (BOGLE)
L. MILLER

R. Belt (USA)

# *Exxon Valdez* Oil Spill Trustee Council

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


## MEMORANDUM

TO: Restoration Work Force

FROM: Eric F. Myers
Director of Operations

SUBJECT: Materials for RWF Meeting on February 5

DATE: February 3, 1997

Please find attached an agenda for the Work Force meeting scheduled for 9 a.m. on Wednesday, February 5th.

In addition, I have attached background information on three of the items that will be under consideration for possible FY 97 funding at the next Trustee Council meeting (i.e., herring disease, local knowledge about herring, Delight and Desire lakes, and video film production). Although we will not have the Chief Scientist's review until Thursday, we would like to obtain input from the Restoration Work Force to help with development of a recommendation from the Executive Director for consideration by the Trustee Council. (Molly is now at the Chenega land acquisition signing ceremony in Washington D.C. and will not be back until late Wednesday night.)

Thank you. If have questions or comments in advance of the meeting, please call either me, Stan Senner, or Sandra Schubert.

encl: RWF meeting agenda
97162- supplement (1st 4 pp. of DPD)
97248- memorandum
97254- ADFG reply to questions from the Executive Director
video- draft memo to Trustee Council

cc: Robert Spies

# *Exxon Valdez* Oil Spill Trustee Council

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


RESTORATION WORK FORCE

**9:00 am - Wednesday, February 5, 1997**

Anchorage: Restoration Office
645 G Street
4th floor conference room

Juneau: Restoration Office
Federal Building - room 225

## AGENDA

1. Review of 1997 Restoration Workshop
2. FY 98 *Invitation*
3. Trustee Council meeting agenda items
   - — Delight and Desire Lakes
   - — TEK/herring project
   - — herring disease project
   - — video project
   - — Data Policy
4. Other Items

2/3/97 DRAFT

# Role of Pacific Herring Pound Fisheries on Expression of Viral Hemorrhagic Septicemia Virus in Prince William Sound

| | |
|---|---|
| Project Number: | 97162-supplement |
| Restoration Category: | Research |
| Proposer: | University of California, Davis |
| Lead Trustee Agency: | ADFG |
| Cooperating Agencies: | University of Washington |
| Alaska Sealife Center: | |
| Duration: | 4th year, 5-year project |
| Additional Cost FY97: | $34,300 |
| Cost FY98: | not estimated |
| Cost FY99: | none |
| Cost FY00: | none |
| Cost FY01: | none |
| Cost FY02: | none |
| Geographic Area: | Prince William Sound, |
| Injured Resource/Service: | Pacific herring, commercial fishing, subsistence |


## ABSTRACT

When the Pacific herring population in Prince William Sound (PWS) crashed in 1993, commercial fisheries were closed. Viral hemorrhagic septicemia virus was a major cause of population decline. In 1994, the virus was isolated from 5% of fish in PWS, but in 1996 the virus was not isolated from any fish sampled from PWS or Sitka Sound. By comparison, virus was isolated from 21% of fish sampled from the 1996 spawn-on-kelp pound fishery in Craig, Alaska. Because the pound fishery will be reopened in PWS in 1997, we propose study to determine the prevalence of virus in fish and water associated with the pounds. Results will be compared with approved field and laboratory studies to determine if virus in pound fisheries threatens population recovery.

## INTRODUCTION

Pacific herring (*Clupea pallasi*) normally spawn in April in Prince William Sound (PWS). Although near-record spawning biomass was predicted for 1993, the population crashed. Many fish behaved abnormally and had external hemorrhages; therefore, the prespawning commercial fishery was severely curtailed in 1993. In limited study conducted by ADFG, viral hemorrhagic septicemia virus (VHSV) was the only major pathogen isolated, but its role in population decline was not determined (Meyers et al. 1994). When herring populations continued to decline in 1994, project 94320-S was initiated under emergency conditions to determine causes of herring morbidity (sickness), with particular emphasis on the role of VHSV. The virus was isolated from 11 of 233 herring (4.7%) in 1994 and infection was associated with lesions.

In 1995 and 1996 we repeated and expanded the 1994 study by sampling prespawning, spawning, and immediate postspawning herring in both PWS and a reference site, Sitka Sound (SS). Viral hemorrhagic septicemia virus was isolated from 6.2% of prespawning fish from PWS in 1995, but VHSV was not isolated from any spawning fish in PWS or SS in 1995, or from any fish in 1996. Since 1995, laboratory study under the direction of Dr. Richard Kocan at the University of Washington (95162 - 97162) has revealed that handling and crowding stress resulted in expression of latent VHSV when Pacific herring sampled from Puget Sound were held for as little as two days. Also, VHSV was readily passed through the water to known virus-free fish, and the resultant disease is lethal.

Based on these findings and recommendations from peer reviewers (November 1995 review of Pacific herring projects funded by the Trustee Council), a pilot study was conducted on the 1996 spawn-on-kelp fishery in Craig, Alaska (SE Alaska). In this fishery, reproductively mature adults are caught via purse seine and transported to floating net pens where they are held (closed pounding) up to six days while they spawn on vertically suspended kelp blades. After spawning, fish are released from the pens to rejoin the wild stocks. Of 38 fish sampled nonrandomly from the fishery, 21% were positive for VHSV (T.R. Meyers, ADFG, report 96-0571).

## NEED FOR THE PROJECT

### A. Statement of Problem

Pacific herring are an injured biological resource in Prince William Sound (PWS) classified as "not recovering." Because of extreme population decline, commercial fishing for herring was severely curtailed in 1993, and closed entirely in 1994, and 1995, resulting in lost services. With slight population recovery, a limited bait fishery was reestablished in the fall of 1996, and more extensive fisheries are planned for spring 1997, including a spawn-on-kelp pound fishery. Studies from the laboratory and the pound fishery in Craig provided evidence that pounding fish may result in expression of the lethal form of otherwise latent VHSV. However, the potential threat of closed pound fisheries to the population of Pacific herring in PWS is unknown.

Pound fisheries in PWS gross about $2 million annually, and most of the fishers live in the PWS area. If closed pounding is not allowed, one management alternative is an open-pound fishery.

For open pounding, blades of kelp are taken to areas of natural spawning, and fish are not held in nets. Open pounding has the potential to cause less stress to the fish, but pounders estimate that product value from open pounds would be only ½ the value from closed pounds (Torie Baker, Cordova District Fishermen United, personal communication). Without clear evidence that the pound fisheries are a threat to the resource, fishers are not willing to accept a $1 million annual loss in receipts. However, fishers are also interested in the long term health of the population. They are willing to make changes in their fishery if solid data indicates that closed pounding is a risk to the population. Therefore, we propose detailed study of VHSV expression in pound fisheries in PWS.

In other field studies, the fungus *Ichthyophonus hoferi* was significant, particularly among older fish, and adult Pacific herring have several other parasites. However, we have no evidence that pounding has any effect of prevalence or severity of *Ichthyophonus* or any other parasites. Therefore, pound studies will focus on diagnosis of VHSV and thorough gross examination for other signs of disease. Project 97162 already has funds approved for complete necropsy of 260 fish from PWS, and results from the complete necropsies will be compared to results from proposed pound studies.

### B. Rationale

This project will help restoration by providing information on role of closed pound fisheries in the expression of VHSV and the potential for virus transfer to the entire population. The project is submitted as a supplemental (emergency) proposal because results from the Craig pound fishery were not available until June, 1996, and ADFG did not determine until December 1996 that closed pounding would be allowed in PWS in 1997. If proposed 1997 studies of PWS pound fisheries find enhanced expression of VHSV, then managers can make informed decisions for the 1998 season, minimizing the potential for VHSV to inhibit Pacific herring recovery. Alternatively, if proposed 1997 studies of PWS pound fisheries find minimal expression of VHSV (e.g., handling by PWS pounders may be less stressful to fish than handling by Craig pounders), then a valuable fishery can be continued with confidence.

### C. Location

Study will be done in the northern region of Prince William Sound, Alaska. Similar study is planned for Puget Sound, as part of the laboratory component of 97162 already approved (under the direction of R.M. Kocan). Information from these studies will benefit fisheries throughout the range of Pacific herring as managers consider alternatives for Pacific herring fisheries. As the resource is enhanced, fishers in these regions could potentially benefit.

## COMMUNITY INVOLVEMENT

This proposal is being submitted primarily at the request of Cordova-area residents. They have expressed great interest in understanding the role of VHSV in their fisheries and in the population in general, and the attached letter indicates their willingness to participate in this study. Gary Marty met with the Cordova District Fishermen United in Cordova in April, 1996,

and he has met with several individual members since then. Gary Marty and Dick Kocan have participated in conference calls with ADFG, and at least one of these calls included local fishers. These interactions, including e-mail updates, will continue with this project.

## PROJECT DESIGN

### A. Objectives

The overall goal of this project is to determine the role of closed pound fisheries on the expression of VHSV, and to determine the potential for spreading the disease to the unpounded Pacific herring population in PWS. Specific objectives include:

1. Determine VHSV prevalence in fish entering into pound fisheries and of unpounded spawning fish in the population.

2. Determine time course of VHSV infection while herring are impounded.

3. Determine VHSV prevalence in dead fish in pounds.

4. Determine VHSV prevalence at the time when fish would have been released from pounds [in previous years, fish were released from the pounds, but new ADFG regulations for 1997 require that no fish be released].

5. Determine VHSV titer in water samples within and around open and closed pounds during pounding.

6. Determine if VHSV prevalence varies with capture, handling, and pounding conditions (based on visual observations by management biologists).

7. Determine the effect of age and gender on VHSV activation/expression.

8. Determine the effect of environmental conditions in pounds (dissolved oxygen, temperature, and salinity).

### B. Methods

Actual commercial pounds will be surveyed during this study. This strategy has two major advantages: 1) the project does not need to purchase or lease pounds (a monetary savings to the project); 2) the results are a true reflection of what happens in pounds in the field. The disadvantage of this strategy is that scientists cannot control many of the variables of the pounds (e.g., when pounds are loaded, density of pounds, and activity in and around pounds). Given those limitations, biologists and pathologists will consult on-site to meet state objectives as closely as possible.

Data to test most of our hypotheses require sampling fish from pounds or the surrounding

Copy

Memorandum

To: Molly McCammon, Executive Director, EVOS Trustee Council
From: Henry Huntington, Jody Seitz
Re: Proposal 97248
Date: January 29, 1996

Upon meeting and reviewing proposal 97248, Henry Huntington and I have made the following revisions:

1. Jody Seitz will be the Principal Investigator,and Henry Huntington will be the advisor for the project through 97052B.

2. We want to ultimately to document traditional and local knowledge of herring natural history in these communities: Seward, Cordova, Tatitlek, Valdez Chenega Bay, Kodiak, Homer, Port-Graham, Seldovia, and Nanwalek. Realistically, we expect to be able to complete the work in four communities, Cordova, and three others prior to the end of this fiscal year, and complete a report of the first year's research by April 15 of 1998. Performance of the project in all communities requires community or, in the case of larger towns, endorsement by the appropriate organizations. We will carry out interviews only where the communities express interest and desire to participate. Researchers will follow established protocols for research with human subjects.

3. We will document the distribution of herring which community residents recall from their outdoor activities. Researchers will seek information regarding juvenile and adult herring, spawn, and other forage fish distribution. They will document time period, season, proximity to nearshore, association with other species such as birds and marine mammals; and the way in which respondents were able to make their observations.

4. Herring distribution may vary with abundance: In years of high abundance herring populations may occur over a broader range of habitats. Data from this project will assist SEA project herring researchers in assessing population strengths and preferred habitats for herring, especially juvenile herring, over a longer time period than is known through existing records.

5. The data will be compiled into ascii files and represented in a geographic information system such as Arc Info for use by SEA the herring project, other researchers and community residents. An accompanying report will present summaries of ecological information contributed by respondents for distribution to scientists, communities, and other interested parties.

6. Researchers plan to combine data gathering with teaching the interview technique and methods to students in the Youth Area Watch to expand the data gathering effort through student/elder interviews.

7. In addition to the historical interviews, researchers will continue to collect historical data and records from existing sources, such as the National Archives, for entry into a long-term herring database.

8. The project budget includes personnel costs for the principal investigator; travel for 30 person trips, including part of the advisor's travel; and computer costs that include software for analyzing qualitative datasets - the computer which Seitz is presently using is on loan from ADF&G. We estimate approximately five individuals will be interviewed in each community.

Revised Two Year Budget:

| | FY97 | FY98 | Total |
|---|---|---|---|
| Personnel: | | | 36,000 |
| 3 mo Principal In. | 12,000 | | |
| 6 mo PI | | 24,000 | |
| 1 mo technical assist. | 2,000 | | |
| 2 mo technical assist. | | 4,000 | |
| 2 mo advisor (under 052B) | | | |
| 2 mo advisor | | | |
| Travel: 30 person trips @ $400 | | | 12,000 |
| yr 1 - 10 trips | 4,000 | | |
| yr 2 - 20 trips | | 8,000 | |
| 100 days per diem @ $100 | | | 10,000 |
| yr 1 - 35 days | 3,500 | | |
| yr 2 - 65 days | | 6,500 | |

| | | | | |
|---|---|---|---|---|
| Contractual: GIS specialist | | | | 8,000 |
| yr 1 | 4,000 | | | |
| yr 2 | | 4,000 | | |
| Participants: - @75 total @$20/hr x 6hr/piece | | | | 9,000 |
| yr 1 - 35 | 4,200 | | | |
| yr 2 - 40 | | 4,800 | | |
| Supplies: | | | | 11,000 |
| computer/ software | 3,000 | | | |
| paper, mylar, maps, etc | | | | 2,000 |
| yr 1 | 1,000 | | | |
| yr 2 | | 1,000 | | |
| phone/fax/postage | | | | 2,000 |
| yr 1 | 800 | | | |
| yr 2 | | 1,200 | | - |
| publications/printing | | | | 4,000 |
| yr 1 | 1,250 | | | |
| yr 2 | | 2,750 | | |
| Subtotal: | | | | 94,200 |
| yr 1 | 35,750 | | | |
| yr 2 | | 56,250 | | |
| Indirect costs: | | | | |
| UAF 25% | 8,938 | | | |
| | | 14,062 | | |
| ADF&G 7% | 3,128 | | | |
| | | 4,922 | | |
| Total year 1 | | | 47,816 | |
| Total year 2 | | | 75,234 | |
| Total Two years: | | | | 123,050 |

# STATE OF ALASKA

**DEPARTMENT OF FISH AND GAME**

*DIVISION OF COMMERCIAL FISHERIES*
*MANAGEMENT AND DEVELOPMENT*

*TONY KNOWLES, GOVERNOR*

*3298 Douglas Street*
*Homer, Alaska 99603*
*907-235-8191*


January 17, 1997


RECEIVED
JAN 22 1997
EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL


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

Dear Ms. McCammon,

Regarding your letter to Claudia Slater dated December 9, 1996, concerning the Delight and Desire Lakes proposal, please find our responses to the four questions that you requested. Thank you for the opportunity to respond to these concerns and please, do not hesitate to inquire if there are any other questions you may have.

Sincerely,

W. J. Hauser for:

Mark Dickson

Nick Dudiak

**Question #1**: Preliminary estimate of implementation (fertilization) and monitoring costs over the life of the project.

There are several assumptions that must be made in order to calculate a rough estimate of the implementation and monitoring cost. **First**, the "life of the project" is assumed to mean the life after the pre-fertilization survey. We will assume a 2-year application period with a 3-year monitoring program, the third year monitoring will evaluate the second year application. The monitoring efforts will include 1) limnology sample surveys to evaluate limnological response to the fertilizer and 2) total return to each lake (aerial estimates of escapement, age-weight-length sampling of the commercial harvest and commercial harvest enumeration) will continue to evaluate project success. **Second**, given a estimated water residence time of 1.9 years for Delight and 0.7 years for Desire and spring Total Phosphorus level of 6, then 11 tons of fertilizer would be required for Delight and 10 tons for Desire Lake. The Total phosphorus level would need to be confirmed. In addition, we would only fertilize one lake, using the other for control. At this time it is anticipated that Delight Lake would be fertilized because of the longer continuing trend of poor escapement/return ratios.

***Two year application period for Delight Lake***:

**Fertilizer Purchase**; 11 tons (66 barrels) required @ $425.00/ton F.O.B. Homer x 2 years ..... = $9,350

**Transport to Delight Lake**; @ 6 barrels/trip = 11 trips @ $800.00/trip x 2 years..... = $17,600

**Transportation and personnel time to apply fertilizer;** 1 trip per week @ $240.00 x 10 weeks = $2,400.00 and standby time at $120.00 per week x 2 years..... = $7,200

**Logistics to transport skiff to Delight Lake; 2 hrs.** helicopter @ $750.00/hr.....= $1,500

**Hardware, fertilizer pump and sprayer assembly**.....= $750

***Three year monitoring period***

**Limnology sample logistics;** 5 sampling trips to collect required limnology samples @ $165.00/hr x 2 hrs. = $1,650 x 3 years.....= $4,950

**Limnological analysis;** 2 lakes, sampled 5 times each per year (first year's limnological costs are included in the FY97 DPD budget proposal).
2 lakes, 2 sampling stations each with 2 sampling depths each sampled 5 times per season: 2 x 2 x 2 = 8 sampling depths each trip @ $315.00 each depth = $2,520.00 x 5 sampling dates = $12,600 x 2 years ..... = $25,200

**TOTAL**..... = **$66,550**

**Question # 2** Potential funding commitments for phase two (implementation and monitoring).

Potential funding sources are likely to be the responsibility of the potential user groups that have traditionally used the wild sockeye resources of the Delight and Desire Lake system. These would include commercial, sport and subsistence users and the organizations that they represent; the Lower Cook Inlet Fisheries Development Corporation (CIFDC) Lower Cook Inlet Seiners Association (CISA) and the Port Graham Corporation. Previous correspondence from the seiner associations (attached) submitted with the FY97 project proposal, demonstrates their willingness and commitment to investigate methods to fund phase two of the project. However, given the poor return of pink salmon to Tutka Hatchery in 1996 (revenue of which finances a large part of Lower Cook Inlet fishery enhancement projects) and the poor forecast for the 1997 sockeye salmon return to Lower Cook Inlet enhancement projects, budget constraints could likely defer actual contribution by the CIFDA and CISA.

Mr. Pat Norman, President of the Port Graham Corporation, was queried about their commitment to this project. He replied that although the Corporation does support this project, he was not authorized to make a financial commitment without a presentation to the Board. He did point out, however, that the Corporation is a member of the Cook Inlet Aquaculture Association and that the project had their support. In addition, during recent years, the Corporation had financially supported a similar (but more complicated project) in the English Bay lakes drainage, so there is a precedent of support by the Board.

Gary Kyle, Regional Limnologist for the Alaska Department of Fish and Game (ADF&G), has stated that the results of mandatory pre-fertilization surveys are valid for up to five years. The proposers and ADF&G feel that it is important to investigate the Delight and Desire Lake system to develop tools that could be used to improve conditions that may have been responsible for the decline in sockeye production in Nuka Bay. Given the 5-year period for which results are valid, the proposers are optimistic that funding mechanisms can be developed. The proposers and ADF&G believe that the wild sockeye stocks inhabiting Delight and Desire Lakes have substantial intrinsic value and the proposed pre-fertilization and limnology survey will provide an important first step in answering questions concerning diminished production from the Delight and Desire Lake systems.

Another very important side benefit of the proposed research for these two lake systems would allow biologists, through the comprehensive biological surveys, to evaluate the current biological escapement goals and the accuracy of the adult escapement enumeration methodology and provide justification for any adjustments. If any adjustments are needed and justified, they could very well play an important role in the rehabilitation of the native sockeye stocks.

**Question # 3** Who would be the beneficiaries of the project?

When State of Alaska commercial harvest records were researched for historical use of the Delight and Desire sockeye stocks, there were no record of subsistence use. The record dates back to the early 1970's. However, several contacts by ADF&G Subsistence Division with the residents of Port Graham Village have confirmed that there has been a subsistence use of the sockeye salmon runs into

Delight and Desire Lakes both pre-historically and within this generation. (Interviews are presently in raw data format and are expected to be converted to a report format by approximately February 1, 1997.) Meanwhile, there are at least eight seine permit holders who fish commercially in that area. Some personal/ household use harvest does occur at that time.

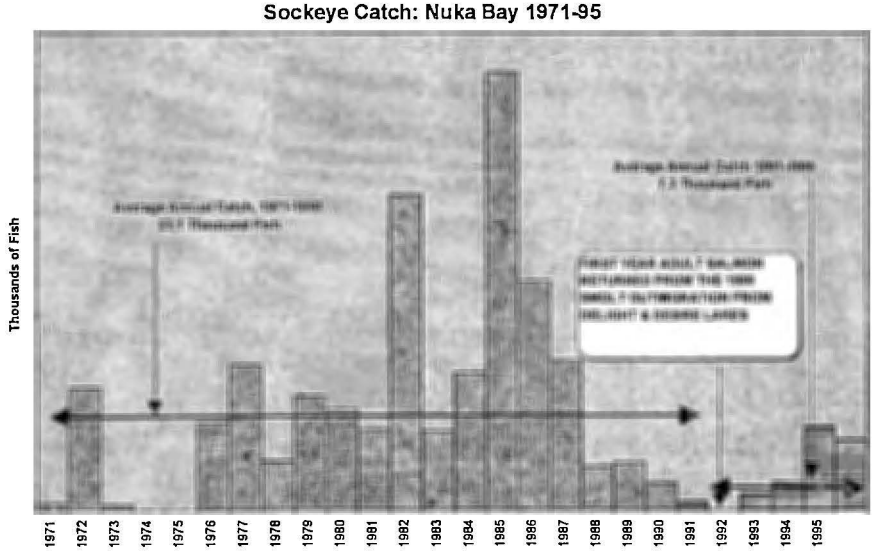
In addition to the subsistence and commercial use of the Delight and Desire sockeye resource by residents of Port Graham, the approximately 85 lower cook inlet salmon seine fishermen would benefit by increased stock abundance at Delight and Desire Lakes.

**Question # 4 Catch and escapement history**

As you may recall in the Detailed Project Description (DPD) we examined sockeye harvest from Nuka Bay, 1971-1995 and demonstrated an average lower catch of 7,300 fish for the period 1991-1995 as compared to 23,100 fish for the period 1971-1990 (Figure 1). We chose to examine the annual harvest in Nuka Bay because the proposal "Delight and Desire Lakes Restoration Project" is intended to mitigate losses or reduced services of commercial fishing. The valid concern was raised that this analysis did not account for changes in fishery effort and consequently may not accurately reflect declines in total return.

Accordingly, we have re-evaluated Delight and Desire stock trends based upon total returns. This analysis represents the total sockeye production of Nuka Bay. The period (1991-1996) represents returning adults that have out migrated Delight and Desire Lakes as smolts beginning in 1989. We are focusing our concerns on the lower production level that is evident during this recent period. The average total return for the period, 1975-1990 is 48,700 fish as compared to 25,750 fish production for the period 1991-1996 (Figure 2). The high variability of the data (standard deviation = 33.6, variance = 1,099) for the period 1975-1990 is difficult to explain. The standard deviation and variance is 12.9 and 167.3 respectively for the period 1991-1996. It is evident from Figure 2 that 1982 and 1985 are outliers for the period, 1975-1990. Factors that could have affected the production (for 1982 &1985) are a higher than normal marine survival rate coupled with unusually productive spawning and rearing survival.

Figure 1. Total catch, Delight and Desire Lakes. 1971-1996.




Having no method to evaluate the unusually high production years of 1982 & 1985, a more conservative method for determining average total return for the period, 1975-1990, would be to remove the two prominent outlier years, 1982 & 1985, (Figure 3).

The average total production for the period 1975-1990, with the outliers deleted, is 38,315 fish while the total

return for the period 1991-1996 is 25,750 fish (Figure 3). This production level from 1991-1996 represents a 33% decrease from the 1975-1990 period. Please note that catch data are available from 1971 but escapement data is available from only 1975.

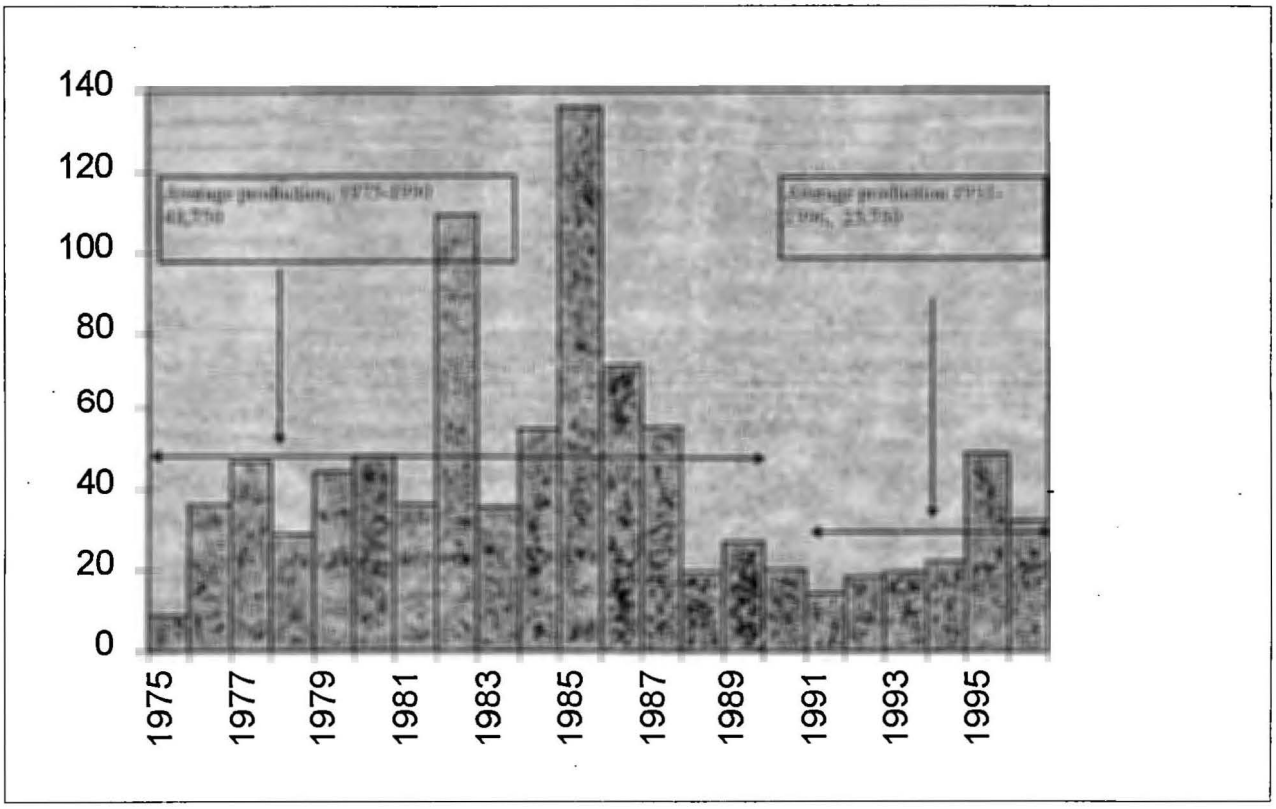



Figure 2. Total production, Delight and Desire Lakes, 1975-1996. Production data includes escapements and harvest from both lakes.

Although no direct link from the EVOS to the reduced production level can be made, this production period (1991-1996) represents the period that adult salmon first returned from the 1989 smolt outmigration. We feel that a 33% production decline is significant and that a comprehensive limnological profile of Delight and Desire Lakes would provide us with the data necessary to evaluate this reduced production level and may determine reasons for the variability in total returns.

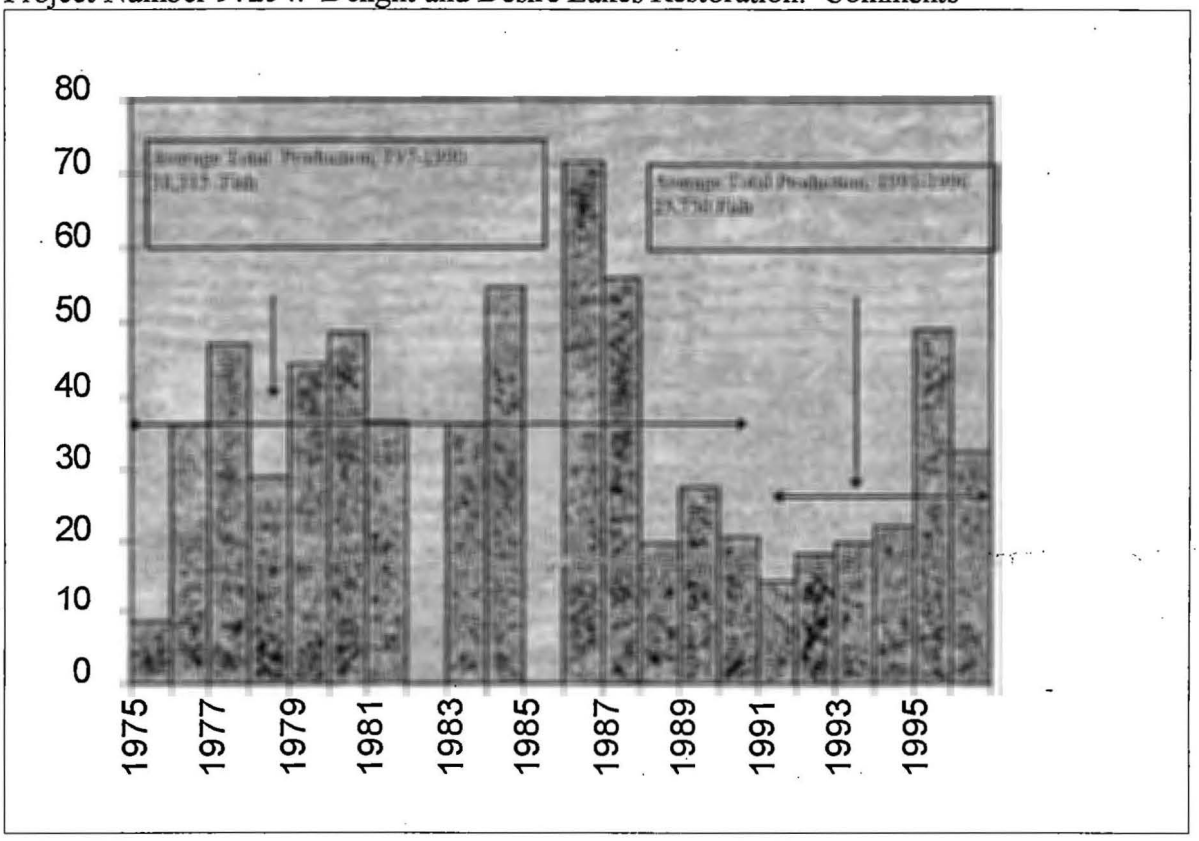



Figure 3. Total production, Delight and Desire Lakes, 1975-1996. Production data from 1982 & 1985 were deleted.

FISHERIES DEVELOPMENT CORPORATION
P.O. Box 2421, Homer, Alaska 99603 • (907) 235-4140 Fax: (907) 235-2656

July 1, 1996

Ms. Molly McGammon
Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 "G" Street
Anchorage AK 99501

Re: Delight and Desire Lakes Restoration Project # 97254.

Dear Ms. McGammon:

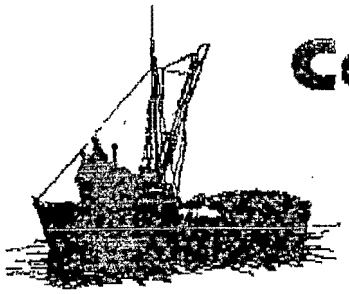
As indicated in past correspondence, LCI Fisheries Development Corporation fully supports Delight and Desire Lakes Restoration Project # 97254. We are committed to Project # 97254 and will actively investigate methods to fund phase two.

Thank you for your careful consideration and support of this project. We will continue to work with all parties to ensure a fully funded and successful restoration of sockeye to Delight and Desire Lakes.

Sincerely,

Darlene Hilderbrand for
LCI Fisheries Development Corporation

cc: Alaska Department of Fish and Game--Homer Office
Pat Norman, Port Graham Corporation



**Cook Inlet Seiners Association**
P.O. Box 4311
Homer, Alaska 99603
235-2656

July 3, 1996

Ms. Molly McGammon
Exxon Valdez Oil Spill Trustee Council
Restoration Office
645 "G" Street
Anchorage AK 99501

Re: Delight and Desire Lakes Restoration Project # 97254

Dear Ms. McGammon:

CISA is pleased that the Trustee Council is highly considering funding Delight and Desire Lakes Restoration Project # 97254. In support, CISA will pursue all possible funding sources for the second phase of the Project.

Thank you for your effort on behalf of Delight and Desire Lakes Restoration Project # 97254.

Sincerely,

Chuck Walkden, President
Cook Inlet Seiners Association

cc: Pat Norman, Port Graham Native Association
LCI Fisheries Development Corporation
Alaska Department of Fish and Game--Homer

# MEMORANDUM

*Exxon Valdez* Oil Spill Trustee Council
Restoration Office
645 G St, Anchorage, Alaska 99501
907/278-8012 FAX 276-7178

DRAFT

TO: Trustee Council Members

FROM: Molly McCammon
Executive Director

DATE: February 3, 1997

SUBJECT: Documentary Filmmaking

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**Motion**
Authorize funds not to exceed $100,000 to contract with a private film crew to produce documentary-style film, a 10-minute video, a 30-minute documentary and still photographs covering EVOS Trustee Council projects, goals and accomplishments.

**Background**
Members of the PAG have expressed a strong interest in this projeact as an important step in getting EVOS restoration information to the public on a nationwide scale. This two-year project has multiple uses in helping us prepare for the 10th anniversary and educate the public about the status of recovery. The project is intended to achieve the following objectives:

A) Provide raw footage of science projects and habitat acquisition parcels for video press releases.

B) Provide raw footage in bulk to be released to independent documentary filmmakers.

C) Create a 10-minute documentary explaining the EVOS TC process and highlighting accomplishments. This would be used at public meetings and press briefings to provide a quick overview. It could also be used in a "continuous replay" format as part of a larger display.

D) Create a 30-60 minute documentary and market it for airing on public and private stations.

E) Create a library of color slides and black and white photographs for use in newspapers, magazines and other publications.

The plan is to budget approximately $50,000 a year over the next two years to contract with an independent filmmaker through a competitive bid to shoot the film and produce documentaries that meet public broadcasting guidelines. A still photographer would also be hired as part of the same package. An RFP would be issued to help select the right contractor.

Most of the filming would take place this summer with production to take place during the winter of '97-'98. This will give us enough time to distribute raw footage and market the documentary for the 10th anniversary.

## Proposed Timeline

**FY97**

Preproduction planning. The documentary should be scripted as much as possible before going into the field.

Filming in the summer of 1997 should cover:

-- major parcels acquired through the habitat protection program
-- Kenai River parcels
-- major science projects in the field
-- injured resources and services (purchased as stock footage and taken from public archives)
-- Alutiiq Museum, SeaLife Center

**FY98**

Production in fall of 1997 should include:

-- production of 10-minute overview
-- creation of video press releases with variety of cuts

Filming in the summer of 1998 should cover:

-- selected science projects in the field
-- opening of Alaska SeaLife Center

Production in summer-fall of 1998 should include:

-- packaging video for documentary users
-- production of a 30- and/or 60-minute documentary

## Estimated Budget

| | FY97 | | FY98 | |
|---|---|---|---|---|
| Pre-production | $ 6,000 | | | |
| Filming ($1,200/day) | $ 9,600 | (8 days) | $ 4,800 | (4 days) |
| Research/writing ($300/day) | $ 4,500 | (15 days) | $ 3,000 | (10 days) |
| Graphics ($200/hr) | | | $ 5,000 | (25 hours) |
| Music | | | $ 2,500 | |
| Editing ($125/hr) | $ 2,000 | (2 days) | $ 5,000 | (5 days) |
| File Footage ($60/sec) | $ 4,000 | | $ 8,000 | |
| Voice | | | $ 1,500 | |
| Transportation | $20,000 | | $ 15,000 | |
| Copies | $ 1,000 | | $ 1,000 | |
| Cover Design | | | $ 1,000 | |
| Photographer ($400/day) | $ 3,200 | | $ 1,600 | |
| **TOTAL** | **$50,300** | | **$48,400** | |

# *Exxon Valdez* Oil Spill Trustee Council

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


## FAX COVER SHEET

To: Restoration Work Force

From: Eric Myers Date: 2-3-97

Comments: Total Pages: 21 pages

→ materials for Restoration Work Force meeting on Wednesday, Feb. 5th

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
C. Slater/B. Hauser/J. Sullivan
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Fay, Ginny
Rice, Bud
Spies, Bob
Holbrook, Ken
Wright, Bruce

HARD COPY TO FOLLOW NO. FAX SENT BY:

1/10/97

# *Exxon Valdez* Oil Spill Trustee Council

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


February 3, 1997

Chaz and Darcy Glagolich
Chazman Charters
P.O. Box 2826
Kodiak, Alaska 99615

Dear Mr. and Mrs. Glagolich,

Thank you for your recent e-mail message in regard to Long Island. Taking the time to provide your insights regarding the values of this area is appreciated.

At this point, no formal action has been taken by the Trustee Council regarding this parcel nomination. However, please know that I will be sure to provide a copy of your comments to each member of the Trustee Council.

Sincerely,

Eric F. Myers
Director of Operations

# *Exxon Valdez* Oil Spill Trustee Council

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


February 3, 1997

Jan Chatto
P.O. Box 3206
Kodiak, Alaska 99615

Dear Ms. Chatto,

Thank you for your recent e-mail message in regard to Long Island. Taking the time to provide your insights regarding the values of this area is appreciated.

At this point, no formal action has been taken by the Trustee Council regarding this parcel nomination. However, please know that I will be sure to provide a copy of your comments to each member of the Trustee Council.

Sincerely,

Eric F. Myers
Director of Operations


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

**State Trustees**
Alaska Department of Fish and Game
Alaska Department of Environmental Conservation
Alaska Department of Law

# *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

**February 1997**

14 Trustee Council Meeting, Anchorage
19 SEA Herring Review
20-21 APEX Review
24 Harlequin Duck Review

**March 1997**

4-5 Public Advisory Group Meeting (1st day orientation for new members, 2nd day regular meeting)

**April 1997**

For more information on any of the above meetings, please contact the Anchorage Restoration Office.

*** Tentative Dates**

Update: 2/12/97 rwf

raw

# *Exxon Valdez* Oil Spill Trustee Council

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


## FAX COVER SHEET

To: Restoration Work Force

From: Rebecca Williams Date: 2/12/97

Comments: FAXED Total Pages: 2

Please distribute. Thanks

RESTORATION WORK FORCE MEMBERS INCLUDE:

Belt, Gina
Berg, Catherine
Fries, Carol
Gibbons, Dave
C. Slater/B. Hauser/J. Sullivan
Bartels, Leslie/Lisa Thomas
Miraglia, Rita
Morris, Byron
Fay, Ginny
Rice, Bud
Spies, Bob
Holbrook, Ken
Wright, Bruce

Cathy Kone
Melanie Bosch

HARD COPY TO FOLLOW _____ FAX SENT BY: Keri Dale

1/10/97

**********
*** ACTIVITY REPORT ***
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TRANSMISSION OK

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| USAGE TIME | 01'15 |
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| RESULT | OK |

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*** MULTI TRANSACTION REPORT ***
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| | [ 10] 19075867555 | WOLFE-GIBBONS |
| | [ 13] 19077896608 | MORRIS-WRIGHT |
| | [ 15] 2698918 | CAROL FRIES |
| | [ 16] 2672450 | RITA MIRAGLIA |
| | [ 17] 2713992 | KEN HOLBROOK |
| | [ 18] 2672464 | SULLIVAN-SLATER |
| | [ 19] 7863636 | L.BARTELS |
| | [ 20] 7863350 | C.BERG |
| | [ 21] 2572517 | B.RICE |
| | [ 24] 2697652 | DIANNE MUNSON |
| | [ 31] 19074655070 | BROWN-FAY |
| | [ 38] 2715827 | G.BELT |
| ERROR | | |