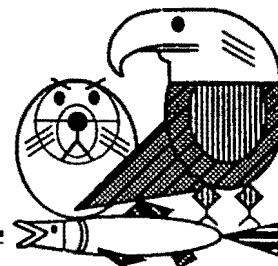


Exxon Valdez Oil Spill Trustee Council

Restoration Office

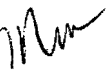
645 G Street, Suite 401, Anchorage, Alaska 99501-3451

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



MEMORANDUM

TO: Trustee Council Members

FROM: Molly McCammon 
Executive Director

DATE: February 26, 1996

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

RECEIVED
FEB 29 1996

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

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

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

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

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

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

Trustee Agencies

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

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

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

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

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

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

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

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

Status of FY 95 Projects as of December 31, 1995

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

Status of FY 96 Projects as of December 31, 1995

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

Conclusion

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

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

ATTACHMENT A

Summary of Project Report Status as of December 31, 1995

1992 WORK PLAN

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

1993 WORK PLAN

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

1994 WORK PLAN

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

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

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

OIL SPILL PUBLIC INFORMATION CENTER

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

**Final Reports
January 1996**

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

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

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

Anchorage Copy Centers:

Clay's Printing - (907) 561-6270

TimeFrame - (907) 562-3822

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

FINAL REPORTS

January 1996

Natural Resource Damage Assessment Studies

* = new additions to this list.

Air/Water 3 (Subtidal 3A)

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

Fish/Shellfish 4

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

Fish/Shellfish 4A

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

Fish/Shellfish 7B and 8B

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

Fish/Shellfish 18

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

Fish/shellfish 22

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

Fish/Shellfish 27

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

Fish/Shellfish 30

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

Marine Mammal 5 (Restoration Study 73)

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

Marine Mammal 6-1

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

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

Marine Mammal 6-5

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

Marine Mammal 6-7

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

Marine Mammal 6-9

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

Marine Mammal 6-12

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

Marine Mammal 6-13

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

Marine Mammal 6-14

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

Marine Mammal 6-18

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

Marine Mammal 6-19

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

Restoration Study 47

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

Restoration Study 60C

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

Restoration Study 102

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

Restoration Study 106

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

Subtidal 1B

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

Subtidal 2B/Air Water 2

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

Subtidal 3B

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

Subtidal 5

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

Subtidal 6 (Fish/Shellfish 17)

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

Restoration Projects

* = new additions to this list.

93003

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

93017

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

93034

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

93045

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

93047 (Subtidal Study 2A)

Jewett, S.C., and T.A. Dean, R.O. Smith, M. Stekoll, L.J. Haldorson, D.R. Laur, and L. McDonald. 1995. The Effects of the Exxon Valdez oil spill on shallow subtidal communities in Prince William Sound, Alaska 1989-93, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93047, Subtidal Study Number 2A), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

93047-2

Braddock, J.F. and Z. Richter. 1995. Microbiology of subtidal sediments: monitoring microbial populations, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration

Project 93047-2), University of Alaska Fairbanks, Fairbanks, Alaska.

93051

Sundet, K., M.N. Kuwada, and J. Barnhart. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93051), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

93051B

Kuletz, K.J., D.K. Marks, N.L. Naslund, N.G. Goodson, and M.B. Cody. 1994. Information needs for habitat protection: marbled murrelet habitat identification, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93051B), U.S. Fish and Wildlife Service, Anchorage, Alaska.

93051B - Forest Service Component

DeVelice, R.L., C. Hubbard, M. Potkin, T. Boucher, and D. Davidson. 1995. Characterization of upland habitat of the marbled murrelet in the Exxon Valdez oil spill area, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93051B, Forest Service Component), USDA Forest Service, Chugach National Forest, Anchorage, Alaska.

*94007-1

Bittner, J.E. and D.R. Reger. 1995. The 1994 EVOS report, spill area site and collection plan, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 94007-1), Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, Office of History and Archaeology, Anchorage, Alaska.

94139-B1

Wedemeyer, K. and D. Gillikin. 1995. In stream habitat and stock restoration for salmon, Otter Creek barrier bypass subproject, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93139-B1), USDA Forest Service, Anchorage, Alaska.

94139-B2

Wedemeyer, K. and D. Gillikin. 1995. In stream habitat and stock restoration for salmon, Shrode Creek barrier bypass subproject, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 93139-B2), USDA Forest Service, Anchorage, Alaska.

94159

Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of Prince William Sound, Alaska: trends following the T/V Exxon Valdez oil spill, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 94159), U.S Fish and Wildlife Service, Anchorage, Alaska.

94173

Hayes, D.L. 1995. Recovery monitoring of pigeon guillemot populations in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 94173), U.S Fish and Wildlife Service, Anchorage, Alaska.

95505B

Olson, R.A. 1995. Use of aerial photograph, channel-type interpretations to predict habitat availability in small streams, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 95505B), USDA Forest Service, Chugach National Forest, Anchorage, Alaska.

ANNUAL REPORTS

December 1995

Annual reports are available for viewing at the Oil Spill Public Information Center.

* = new additions to this list.

Natural Resource Damage Assessment Annual Reports

Restoration 53

Tarbox, K.E., D.L. Waltmyer, L.K. Brannian, R.Z. Davis, B.E. King, J.R. Fox, and S.M. Fried. 1994. Kenai River sockeye salmon restoration, Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Annual Report (Restoration Study Number 53), Alaska Department of Fish and Game, Commercial Fisheries Division, Soldotna, Alaska.

Restoration Project Annual Reports

93015

Tarbox, K.E., R.Z. Davis, L.K. Brannian, B.E. King, J.R. Fox, and S.M. Fried. 1994. Kenai River sockeye salmon restoration, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 93015), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Soldotna, Alaska.

93036

Babcock, M.M., S.D. Rice, and P.M. Harris. 1995. Recovery monitoring and restoration of oiled mussel beds in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 93036), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

93046

Frost, K.F., and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 93046), Alaska Department of Fish and Game, Wildlife Conservation Division, Fairbanks, Alaska.

*94064/94320F

Frost, K.J., L.F. Lowry, and J. Ver Hoef. 1995. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94064 and 94320F), Alaska Department of Fish and Game, Wildlife Conservation Division, Anchorage, Alaska.

94090

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, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 93036), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

94163

Forage fish study in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94163), University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Fairbanks, Alaska.

94166

Carls, M.G., S.D. Rice, and R.E. Thomas. 1995. The impact of exposure of adult pre-spawn herring (*Clupea harengus pallasii*) on subsequent progeny, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94166), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

*94191-2

Heintz, R.A., S.D. Rice, and J.W. Short. 1995. Injury to pink salmon eggs and preemergent fry incubated in oiled gravel (laboratory study), Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94191-2), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

*94255

Tarbox, K.E., R.Z. Davis, L.K. Brannian, and S.M. Fried. 1995. Kenai River sockeye salmon restoration, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94255), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Soldotna, Alaska.

*94259

Edmundson, J.A., G.B. Kyle, and S.R. Carlson. 1995. Restoration of Coghill Lakes sockeye salmon: 1994 annual report on nutrient enrichment restoration, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94259), Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Soldotna, Alaska.

94285

O'Clair, C.E., J.W. Short, and S.D. Rice. 1995. Subtidal monitoring: recovery of sediments in the Northwestern Gulf of Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94285), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska.

*94427

Rosenberg, D.H. 1995. Experimental harlequin duck breeding survey in Prince William Sound, Alaska, Exxon Valdez Oil Spill Restoration Project Annual Report (Restoration Project 94427), Alaska Department of Fish and Game, Wildlife Conservation Division, Anchorage, Alaska.

Exxon Valdez Oil Spill Project Status Summary

1992 Work Plan

Quarter Ending December 31, 1995

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AD	Administrative Director's Office	ALL	No report required.		
ARC1	Archaeological Survey	ADNR	Final report accepted by OSPIC; copies currently being made.	<p>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.</p> <p>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.</p>	
AW1	Surface Oil Maps	ADEC	Project terminated.	DEC/NOAA overflight charts stored in Alaska Archives.	
B02	Boat Surveys	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as 93045 and 94159.

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B03	Murres Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	Related to R11, 93022 and 94039.
B04	Eagles Damage Assessment Closeout	DOI	Final report accepted by OSPIC; copies currently being made.	<p>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.</p> <p>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.</p>	
B06	Marbled Murrelets Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Kuletz, K.J. 1994. Marbled murrelet abundance and breeding activity at Naked Island, Prince William Sound, and Kachemak Bay, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Related to R15, 93051B and 94102.

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B07	Storm Petrels Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Nishimoto, M. and G.U. Byrd. 1994. Effects of oil from the T/V <i>Exxon Valdez</i> spill on fork-tailed storm petrels breeding in the Barren Islands, Alaska. U.S. Fish and Wildlife Service. Homer.</p> <p>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.</p>	
B08	Kittiwakes Damage Assessment Closeout	DOI	REPORT OVERDUE. [NOTE: Redraft of report submitted to Chief Scientist February 13, 1996; under peer review.]	<p>Irons, D.B. 1994. Effects of the <i>Exxon Valdez</i> oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	TS1
B09	Pigeon Guillemots Damage Assessment Closeout	DOI	Final report accepted by OSPIC; copies currently being made.	<p>Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	93034 and 94173

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

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

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

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

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

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FS27	Sockeye Salmon Overescapement	ADFG	Final report accepted by OSPIC; available to public.	<p>Schmidt, D.C., T.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. King, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, <i>Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report</i>, ADFG, Commercial Fisheries Management and Development Division, Soldotna, AK.</p> <p>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.</p>	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	Redraft of report submitted to Chief Scientist August 8, 1995. (NOTE: Final report accepted by Chief Scientist January 26, 1996. Not yet at OSPIC.)	<p>Geiger, H., et al. Run reconstruction and life-history model.</p> <p>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.</p>	Through this project, results from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage.

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

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

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

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

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

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R011	Murre Recovery Monitoring	DOI	Final report accepted by OSPIC; copies currently being made.	<p>Dragoo, D.E., G.V. Byrd, D.G. Roseneau, D.A. Dewhurst, J.A. Cooper, and J.H. McCarthy. 1994. Population levels and reproductive performance of murre based on observations at breeding colonies four years after the T/V <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Homer</p> <p>Numbers of murre breeding at major colonies within the trajectory remained lower in 1992. Breeding chronology was delayed. Productivity at the Barren Islands was higher than in other postspill years, but still lower than normal. Productivity at Puale Bay was normal.</p>	Continued as 93022 and 94039. Also related to B3.
R015	Marbled Murrelet Restoration Study	DOI	<p>The results of this project will be presented in two reports:</p> <p>(1) Report accepted by Chief Scientist. Not yet at OSPIC.</p> <p>(2) Report accepted by Chief Scientist. Not yet at OSPIC.</p>	<p>(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</p> <p>(2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the <i>Exxon Valdez</i> oil spill zone. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout).

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R047	Stream Habitat Assessment	ADFG	Report accepted by OSPIC; available to public.	<p>Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. ADF&G.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection.
R053	Kenai River Sockeye Salmon Restoration	ADFG	Final report accepted by OSPIC; available to public.	<p>Tarbox, K., et al. Kenai River sockeye salmon restoration.</p> <p>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.</p>	R59 analyzed genetic samples collected by this project.
R059	Genetic Stock Identification	ADFG	Annual report accepted by OSPIC; copies currently being made.	<p>Seeb, J. and L. Seeb. Assessment of genetic stock structure of salmonids. ADF&G. June 1993.</p> <p>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.</p>	R53 collected spawning samples.

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

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R071	Harlequin Duck Restoration and Monitoring	ADFG	REPORT OVERDUE. Draft report peer reviewed; returned to PI for revision May 22, 1995.	<p>Rothe, T. Breeding ecology of harlequin ducks in PWS, Alaska. ADF&G.</p> <p>Crowley, D.W. 1993. Breeding habitat of harlequin ducks in PWS, AK. MS Thesis. Oregon State University, Corvallis, OR.</p> <p>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).</p>	B11 corroborated harlequin status in Prince William Sound. R103 documented continued oiled prey. B2 corroborates harlequin status in PWS.
R073	Harbor Seals	ADFG	Final report accepted by OSPIC; available to public.	<p>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.</p> <p>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.</p>	Started in 1989 as MM5. Continued as 93046 and 94064.

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

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

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R103	Oiled Mussels	ADFG, NOAA, DOI	The results of this project will be presented in four reports: (1) NOAA report accepted by Chief Scientist. Not yet at OSPIC. (2) DOI/FWS findings being incorporated into report on 93035. (3) ADFG report accepted by Chief Scientist. Not yet at OSPIC. (4) DOI/NPS report accepted by Chief Scientist. Not yet at OSPIC.	(1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the <i>Exxon Valdez</i> oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska. (2) See 93035. (3) Faro and Bowyer. River otter component. (4) Irvine, G. 1993 Geographic extent and recovery monitoring of intertidal oil in mussel beds in Gulf of Alaska effected by the <i>Exxon Valdez</i> oil spill. (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.

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

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R106	Dolly Varden Restoration	ADFG	Final report accepted by OSPIC; available to public.	<p>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.</p> <p>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.</p>	FS5 and 94139.
R113	Red Lake Sockeye Salmon Restoration	ADFG	Project canceled based on findings of FS27.	<p>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.</p>	Related to FS27. NEPA compliance for Red Lake restoration project was funded through 93030, which was canceled when the project was dropped.
RT	Restoration Team	ALL	No report required.		

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

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ST2B	Deep Water Benthic	ADFG	Final report accepted by OSPIC; available to public.	<p>Feder, H. 1995. Injury to deep benthos. ADFG</p> <p>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.</p>	CH1A, ST1B, ST2A, ST4, ST5, ST6, ST7, ST8, and TS1.
ST3A	Caged Mussels Damage Assessment	NOAA	<p>The results of this project will be presented in two reports:</p> <p>(1) Redraft of report submitted to Chief Scientist July 18, 1995.</p> <p>(2) Report submitted to OSPIC; undergoing formatting review.</p>	<p>(1) Petroleum hydrocarbons in near surface seawater of PWS: chemical sampling and analysis.</p> <p>(2) Petroleum hydrocarbons in near surface seawater of PWS: analysis of caged mussels.</p> <p>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.</p>	ST3B

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ST3B	Sediment Traps Damage Assessment	ADEC	Final report accepted by OSPIC; available to public.	<p>Sale, David M., J. Gibeaut, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the <i>Exxon Valdez</i> oil spill. ADEC</p> <p>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.</p>	ST3A and ST4
ST4	Fate and Toxicity Damage Assessment	NOAA	Report submitted to OSPIC; undergoing final formatting review.	<p>Fate and toxicity of spilled oil from the <i>Exxon Valdez</i>. 1994.</p> <p>Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of <i>Exxon Valdez</i> oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely.</p>	AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies.
ST5	Shrimp	ADFG	Final report accepted by OSPIC; available to public.	<p>Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp. ADF&G, Commercial Fisheries Management and Development Division, Anchorage, AK.</p> <p>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.</p>	

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ST6	Rockfish Damage Assessment	ADFG	Final report accepted by OSPIC; available to public.	<p>Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91.</p> <p>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.</p>	ST2A and ST2B
ST7	Demersal Fishes Damage Assessment	NOAA	Final report accepted by OSPIC; copies currently being made. [NOTE: Final report available to public January 31, 1996.]	<p>Collier, T. Assessment of oil spill impacts on fishery resources: measurement of hydrocarbons and their metabolites, and their effects, in important species. NOAA</p> <p>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.</p>	ST1A

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

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

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93006	Site Specific Archaeological Restoration	DOI/ NPS	REPORT (funded under 94007) OVERDUE.	Birkedahl, T., et al. 1993. Archaeological site monitoring and restoration.	Continued as 94007.
				Archaeological restoration assessments conducted at 14 sites in 1993 suggest that a majority of the archaeological vandalism that can either be directly or indirectly linked to the <i>Exxon Valdez</i> 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 <i>Exxon Valdez</i> oil spill event remains highly problematical. Oil monitoring samples from the archaeological sites have not been processed as of this date, but oil was still visible to the naked eye in the intertidal zones of two of the 14 sites visited.	
93012	Genetic Stock Identification of Kenai River Sockeye Salmon	ADFG	Draft report (funded under 94504) submitted to Chief Scientist November 6, 1995; under peer review.	Genetic data were collected during 1992 and 1993 from spawning populations contributing to mixed-stock harvest of sockeye salmon in Cook Inlet. These data were used in a pilot study to estimate the component of Kenai River stocks harvested in mixed-stock areas of Upper Cook Inlet.	Began as R52. Continued as 94504. Spawning samples collected under 93015.

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

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93033	Harlequin Duck Restoration	ADFG	<p>The results of this project will be presented in two reports (funded under 94066):</p> <p>(1) Report on Afognak habitat assessment and PWS production survey submitted to Chief Scientist August 9, 1995.</p> <p>(2) REPORT OVERDUE.</p> <p>Analyses of blood and physiological samples (being performed by UC-Davis) not received. Contract compliance is now two years delinquent.</p>	<p>(1) Restoration monitoring of harlequin ducks in PWS and Afognak Island.</p> <p>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.</p> <p>Blood/physiological analysis and hydrocarbon analyses in process. Harlequin breeding stream/nest site model in preparation. Harlequin breeding assessment completed on North Afognak Island.</p>	<p>Started in 1989 as B11 and continued as R71. 94427 and 96427 continue harlequin brood surveys.</p>
93034	Pigeon Guillemot Recovery	DOI	<p>Report (funded under 94506) accepted by OSPIC; available to public.</p>	<p>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.</p> <p>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.</p>	<p>Continued as 94173.</p>

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

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

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

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
93042	Killer Whale Recovery	NOAA	Final report (funded under 94092) submitted to OSPIC; undergoing formatting review. [NOTE: Final report accepted by OSPIC; available to public February 14, 1996.]	Dalheim, M.E. 1994. Assessment of injuries and recovery monitoring of Prince William Sound killer whales using photo-identification techniques. National Marine Mammal Laboratory, Seattle, WA. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the period 1989-1991. Despite considerable searching effort in PWS and Southeast Alaska, the missing whales have not been observed. Given the stability of resident pods, it is assumed the missing whales are dead. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, and 4.3% in 1991. Zero mortality occurred in 1992 and 1993. The adult annual mortality rate of killer whales is usually less than 2%. Annual pod mortality rates on the order of 20% are unprecedented for North Pacific killer whales.	Close-out/report writing funded under 94092.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
93043	Sea Otter Demographics and Habitat	DOI (NBS)	<p>The results of this project will be presented in three reports (funded under 94246):</p> <p>(1) Data on recovery of sea otter carcasses being presented in MM6 (#15).</p> <p>(2) Final report accepted by Chief Scientist. Not yet at OSPIC.</p> <p>(3) Draft report on sea otter demographics peer reviewed; returned to PI for revision August 21, 1995.</p>	<p>(1) See MM6(#15).</p> <p>(2) Bodkin, J.L. and M.S. Udevitz. 1993 trial aerial survey of sea otters in PWS, Alaska. 1994. NBS, Anchorage, AK.</p> <p>(3) Udevitz, M.S. , B.E. Ballachey, and D. L. Bruden. 1995. A population model for sea otters in western PWS. USNBS. Anchorage, AK.</p> <p>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.</p>	Report writing funded under 94246.
93045	Marine Bird / Sea Otter Surveys	DOI	Final report accepted by OSPIC; available to public.	<p>Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Started as part of B2 and continued as 94159.

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93046	Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS	ADFG	Final report (funded under 94064) accepted by OSPIC; available to public.	<p>Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG</p> <p>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.</p>	<p>Started in 1989 as MM5, which was closed out as R73.</p> <p>Continued as 94064.</p>

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

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

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

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

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

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

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94007	Site Specific Archaeological Restoration	ADNR	<p>The results of this project will be presented in two reports (funded under 95007A):</p> <p>(1) Site protection plan accepted by OSPIC; copies currently being made. [NOTE: Available to public January 1996.]</p> <p>(2) ANNUAL REPORT OVERDUE.</p> <p>[NOTE: Annual report submitted to Chief Scientist for peer review February 12, 1996.]</p>	<p>(1) Bittner, J.E. and D.R. Reger. 1995. The 1994 EVOS report, spill area site and collection plan. ADNR, Anchorage, Alaska.</p> <p>(2)</p> <p>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.</p> <p>Data Recovery: USFS began restoration of two sites in PWS: SEW-440 and SEW-448.</p> <p>Site Protection Plans: ADNR compiled information about the need for site protection, with emphasis on adequate curation of collections in the spill area.</p>	Continuation of 93006.
94020	Black Oystercatcher Interaction with Intertidal	DOI	Project is close-out/report writing for 93035.	See 93035.	Close-out/report writing for 93035.

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

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94041	Introduced Predator Removal from Islands	DOI/ FWS	Annual report accepted by OSPIC; copies currently being made.	<p>Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK.</p> <p>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.</p>	
94043A1	Eshamy River Restoration (W. PWS)	USFS	Project discontinued.		

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

EA completed and decision notice signed July 27, 1995.

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

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

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94064	Harbor Seal Habitat Use and Monitoring	ADFG	Annual report (which includes results of 94320F) accepted by OSPIC; copies currently being made. [NOTE: Available to public January 18, 1996.] NOTE: Project also includes report writing funds for 93046.	<p>Frost, K., et al. 1995. Habitat use, behavior, and monitoring of harbor seals in PWS, AK. ADF&G.</p> <p>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.</p>	Started as MM5; continued as R73, 93046, and 95064.
94066	Harlequin Duck Recovery Monitoring	ADFG	Project is close-out/report writing for 93033.	See 93033.	Close-out/report writing for 93033.

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

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

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

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

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94139C2	Lowe River (6.5 Mile) Instream Restoration	ADFG	No report required (project carried forward as Project 95139C2).		95139C2
94159	Marine Bird & Sea Otter Boat Surveys	DOI	Final report approved by OSPIC;available to public.	Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of PWS, Alaska: Trends following the T/V <i>Exxon Valdez</i> oil spill. 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 9304

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
94163	Forage Fish Influence on Recovery of Injured Species	NOAA, ADFG	<p>The results of this project will be presented in two reports:</p> <p>(1) <u>ADFG</u>: Annual report submitted to Chief Scientist October 3, 1995; under peer review. [NOTE: ADFG report peer reviewed February 20, 1996.] Annual report submitted to OSPIC; undergoing formatting review.</p> <p>(2) <u>NOAA</u>: Annual report accepted by OSPIC; available to public.</p>	<p>(1) Willette, M.</p> <p>2) Tyler, A., et al. Forage fish study in PWS, AK. UAF/NMFS. Appendix by B. Ostrand, USFWS/DOI.</p> <p><u>NOAA</u>:</p> <p>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.</p> <p>November cruise: (a) Temperature-depth profiles for open areas of PWS showed surface temperature 7.0C, warming to 9.0C at 50m depth. Water cooled to 5.0C with further increase in depth. Salinity gradually increased through this depth range, indicating little mixing of the water column and that cooling was occurring from the surface downward due to cold air temperatures. Over the shallow shelf areas the profiles were different, being at 8.0C and mixed to 70m. (b) Five stations were sampled for invertebrate forage species, with euphausiids the abundant crustacean at most stations. (c) Hydroacoustic analysis showed fish mainly located above the temperature maximum at depths of 20 to 40 meters (net sampling showed these fish were young herring mixed with young pollock). Hydrographic data indicated fish aggregations were at temperatures of 7.0 to 7.5C. A second layer of fish was seen near the bottom (likely adult pollock).</p> <p><u>ADFG</u>: pproximately 1,500 stomach samples collected for analysis of diet overlap. Found Pacific herring, walleye pollock, and juvenile chum salmon common and widespread throughout western PWS.</p>	<p>Integrate with Projects 94320 (PWS System Investigation), 94102 (Murrelet Prey), and 94173 (Pigeon Guillemot).</p>

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94165	Herring Genetic Stock Identification in Prince William Sound	ADFG	Project deferred to FY 95 (95165).		95165
94166	Herring Spawn Deposition and Reproductive Impairment	ADFG, NOAA	<p>The results of this project will be presented in two reports:</p> <p>(1) ADFG annual report submitted to Chief Scientist November 20, 1995.</p> <p>(2) NOAA annual report submitted to Chief Scientist October 25, 1995; under peer review. [NOTE: Annual report peer reviewed February 1, 1996.] Annual report accepted by OSPIC; available to public.</p>	<p>(1) Wilcock, et al</p> <p>(2) Carls, M.G., S.D. Rice, and R.E. Thomas. 1995. Impact of exposure of adult pre-spawn herring (<i>Clupea harengus pallasii</i>) on subsequent progeny. NOAA/NMFS, Juneau, AK.</p> <p>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.</p>	Coordinating with USFS regarding avian predation (94320Q).

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

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

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94199	Institute of Marine Science - Seward Improvements	ADFG	No report required.		Continued as 95199-CLO.
				Record of Decision signed by DOI, DOA (USFS), and NOAA October 31, 1994. Capital funding approved by Trustee Council November 2, 1994, subject to Executive Director's approval.	
94217	Prince William Sound Area Recreation Implementation	USFS	Project is close-out/report writing for 93065.	See 93065.	Close-out of 93065.
94244	Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance	ADFG	Annual report submitted to Chief Scientist November 13, 1995; under peer review. [NOTE: Annual report peer reviewed January 6, 1996; not yet at OSPIC.] (NOTE: Report also contains results from 95244.)	Fall, J. 1995. Harbor seal (<i>Phoca vitulina</i>) and sea otter (<i>Enhydra lutrus</i>) cooperative subsistence harvest assistance. ADF&G A harbor seal/sea otter restoration workshop took place in Anchorage December 2, 1994. It was attended by more than thirty people, including representatives from eight communities which use marine mammals for subsistence. A second workshop took place on March 2, 1995.	Continued as 952...

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94246	Sea Otter Recovery Monitoring	DOI	Project is close-out/report writing for 93043. See 93043.		Close-out/report writing for 93043.
94255	Kenai River Sockeye Salmon Restoration	ADFG	Annual report accepted by OSPIC; copies currently being made. [NOTE: Available to public January 18, 1996.]	Tarbox, K.E., R.Z. Davis, L.K. Brannian, and S.M. Fried. 1995. Kenai River sockeye salmon restoration. ADF&G, Soldotna, AK.	Began as R53; continued as 9301 and 93015.
94258	Sockeye Salmon Overescapement	ADFG	Annual report submitted to Chief Scientist November 29, 1995; under peer review. NOTE: Project also includes report writing funds for 93002.	Skilak weight of fall predictive on both escapements and fall fry abundance. 1994 fall fry had low abundance and weight. Lipid comparisons of similar length fall fry from Tustumena and Skilak indicated Skilak fall fry entered winter in poor condition in 1993. 1995 adult return needed to define magnitude and duration of reduced sockeye production.	Started as FS27; continued as 93002 and 95258.

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

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94279	Subsistence Food Safety Testing	ADFG	Annual report submitted to Chief Scientist November 29, 1995; under peer review.	Miraglia, R. Subsistence restoration project: food safety testing. 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 submitted to Chief Scientist October 6, 1995; under peer review. Annual report accepted by OSPIC; available to public. (NOTE: Project also includes report writing funds for 93047.)	O'Clair, C.E., J.W. Short, and S.D. Rice. 1995. Subtidal monitoring: recovery of sediments in the Northwestern Gulf of Alaska. NOAA/NMFS, Juneau, AK.	Continuation of ST2A and 93047. Continued as 95106.
94290	Hydrocarbon Data Analysis and Interpretation	NOAA	No report required.		Continuation of ST8 and 93053. Continued as 95290.
				In FY94, 2,742 samples were received and several hundred were submitted for analysis.	

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

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94320C	Otolith Mass Marking of PWS Pink Salmon	ADFG	Annual report submitted to Chief Scientist March 31, 1995; under peer review.	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.
94320D	Pink Salmon Genetics	ADFG	ANNUAL REPORT OVERDUE. [NOTE: 1/31/96 PI requested extension of due date to April 15, 1996 and that publication manuscript serve as annual report. This request is under review by Chief Scientist.]	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

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

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

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

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

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

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

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

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

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94422	Environmental Impact Statement for the Draft Restoration Plan	USFS	No report required.	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.
94423	Oil Spill Public Information Center (OSPIC)	ALL	No report required.	During the quarter ending 12/31/95, OSPIC staff received 417 visitors, responded to 825 requests for information (of which 250 were sent via e-mail from the Web Home Page), processed 44 interlibrary loans, loaned 90 items, distributed 1,430 documents, and acquired 2 books, 6 reports, 3 periodicals, and 1 video, 8 slides, and 1 cd-rom database. 1,136 documents were added to the Trustee Council Administrative Record and 14 Marine Ecosystem posters were sold. OSPIC staff received 19 NRDA/Restoration Project final reports, approved 15, and distributed copies of 19. OSPIC staff received 8 annual reports, approved 7, and distributed copies of 5. On 12/7/95, OSPIC staff installed statistical software to track hits to the Web Home Page; from 12/7 to 12/31, there were 1,603 hits.	

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

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94428	Subsistence Restoration Planning and Implementation	ADFG	Final report (which also includes results from 95428) submitted to Chief Scientist November 6, 1995; under peer review.	Fall, J.	
94504	Genetic Stock Identification of Kenai River Sockeye	ADFG	Project is close-out/report writing for 93012.	See 93012.	Close-out/report writing for 93012.
94505	Information Needs for Habitat Protection	USFS	Findings included in report prepared under 95505B. See 95505B for status.	See 95505B.	Close-out of 93051. 95505B.
94506	Pigeon Guillemot Recovery	DOI	Project is close-out/report writing for 93034.	See 93034.	Report writing for 93034.

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

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

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

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

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency/ Proposer</u>	<u>ReportStatus</u>	<u>References and Results</u>	<u>RelatedProjects</u>
95093	PWSAC: Restoration of Pink Salmon Resources and Services	ADFG Ferren, PWSAC	Project terminated; no report required.		
95100	Administration, Science Management and Public Information	All	No report required.		
95102-CLO	Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound	DOI (FWS) Kuletz	Project is close-out/report writing for 94102. See 94102 for status.	Kuletz, K.J., et al. 1995. Marbled murrelet foraging patterns in PWS, Alaska.	94102
95106	Subtidal Monitoring: Eelgrass Communities	ADFG Jewett, UAF	Report being drafted. Due date extended to May 30, 1996.		Final report writing funded under 96106.
95110-CLO	Closeout: Habitat Protection and Acquisition	ADNR Fries	No report required.		
95115	Sound Waste Management Plan	ADEC PWSEDC	Final report being drafted.		
95117-BAA	Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation	NOAA Castellini, UAF	Final report being drafted.		
95121	Fatty Acid Signatures of Selected Forage Fish Species in PWS	NOAA Worthy, Texas A&M University	Project not yet authorized for expenditure by Executive Director. Contract awarded May12, 1995. Statement of work sent to Chief Scientist November 8, 1995; under peer review.		
95126	Habitat Protection and Acquisition Support	ADNR Fries	No report required.		

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

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

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95163E	Reproduction and Foraging of Black-legged Kittiwakes (APEX)	DOI (FWS) Irons	Annual report being drafted.		96163
95163F	Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding)	DOI (FWS) Hayes	Project is close-out/report writing for 94173. See 94173 for status.		94173
95163F1	Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX)	DOI Hayes	Annual report being drafted.		96163
95163G	Seabird Energetics (APEX)	NOAA Roby	Annual report being drafted.		96163
95163I	Seabird/Forage Fish Interaction: Program Management and Integration	DOI (FWS) Duffy	Annual report being drafted.		96163
95163J	Barren Islands Seabird Studies (APEX)	DOI Roseneau	Annual report being drafted.		96163
95163K	Using Predatory Fish to Sample Forage Fish (APEX)	DOI Roseneau	Annual report being drafted.		96163
95163L	Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/ Distribution of Forage Fish in Barren Islands (APEX)	DOI Piatt	Annual report being drafted.		96163
95165	PWS Herring Genetic Stock Identification	ADFG J. Seeb	Annual report being drafted.		96165

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

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

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95320G	Phytoplankton and Nutrients	ADFG McRoy & Eslinger, UAF	Annual report being drafted.		96320
95320H	Role of Zooplankton in the PWS Ecosystem	ADFG Cooney, UAF	Annual report being drafted.		96320
95320I	Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds)	ADFG Schell	Annual report being drafted.		96320
95320I(2)	Isotope Tracers - Food Webs of Fish	ADFG Kline, UAF	Annual report being drafted.		96320
95320J	Information Systems and Model Development	ADFG Patrick, PWSSC	Annual report being drafted.		96320
95320K	PWSAC: Experimental Fry Release	ADFG Ferren & Lindley, PWSAC	Annual report being drafted.		96320
95320M	Observational Physical Oceanography in PWS and the Gulf of Alaska	ADFG Vaughn, PWSSC	Annual report being drafted.		96320
95320N	Nearshore Fish	ADFG Thomas, PWSSC	Annual report being drafted.		96320

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

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95505B	Data Analysis for Stream Habitat	USFS Olson	Final report accepted by OSPIC; available to public. Report also includes findings from 93051 and 94505.	Olson, R.A., 1995. Use of aerial photograph, channel-type interpretations to predict habitat availability in small streams, USDA, Forest Service, Chugach N.F., Anchorage, AK	93051, 94505

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

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

БЛАГОТВОРИТЕЛНИ ОРГАНИЗАЦИИ: ОБЩЕСТВО СЪЗНАНИЕ

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

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

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

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

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

1996 Work Plan
Quarter Ending December 31, 1995

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

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

1996 Work Plan
Quarter Ending December 31, 1995

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

Quarter Ending December 31, 1995Page 11

1996 Work Plan
Quarter Ending December 31, 1995

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

1996 Work Plan
Quarter Ending December 31, 1995

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

1996 Work Plan
Quarter Ending December 31, 1995

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

LABOR FORCE ON SPRING 1990: 6,000,000

<u>Project #</u>	<u>Project Title</u>	<u>P.I.</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Authorization</u>	<u>Project Tasks Completed this Quarter</u>
96210	Prince William Sound Youth Area Watch	ADFG Chugach RRC	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> DONE: Students selected to participate DONE: Students receive training DONE: Students select onshore research and testing sites Students select offshore sites Students set up database <u>Ongoing:</u> Students check onshore testing sites twice weekly Students check offshore area testing sites twice monthly Students provide data to PWSSC weekly
96214	Documentary on Subsistence Harbor Seal Hunting in PWS	ADFG Tatitlek Village	On file; review complete	CE on file	On file	<u>Oct - Dec:</u> DONE: Award contract <u>Jan - Mar:</u> Develop story line and story board for video <u>Apr - June:</u> Shoot necessary footage, conduct interviews <u>July - Sept:</u> Edit film Contractor will deliver 40 copies of videos
96220	Eastern PWS Wildstock Salmon Habitat Restoration	USFS/Schmid Eyak Native Village	On file; review complete	Project is EA prep. only	On file	<u>Oct - Mar:</u> Review of existing information UNDERWAY: Recruit fish habitat survey crew 1 <u>Apr - June:</u> Identify study streams Recruit student interns Arrange logistics <u>July - Sept:</u> Conduct fisheries habitat surveys Analysis of field data

EXXON Valdez Oil Spill Project Status Summary

1996 Work Plan

Quarter Ending December 31, 1995

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

1996 Work Plan

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

1996 Work Plan
Quarter Ending December 31, 1995

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

1996 Work Plan
Quarter Ending December 31, 1995

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

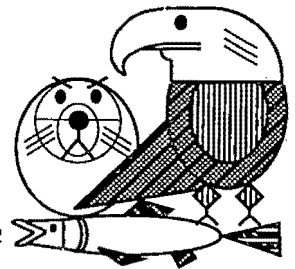
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Exxon Valdez Oil Spill Trustee Council

Restoration Office

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

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



MEMORANDUM

TO: Trustee Council Members

FROM: Molly McCammon
Executive Director

DATE: November 13, 1995

RE: Quarterly Project Status Summary -- September 30, 1995

RECEIVED
NOV 15 1995

EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD

Attached is the *Exxon Valdez* Oil Spill Project Status Summary for the quarter ending September 30, 1995, for all projects funded by the Trustee Council during 1992, 1993, 1994, and 1995. The Summary focuses on the status of project reports, and includes progress updates for FY 95 projects.

As of September 30, 1995, a total of 76 final reports had been accepted by the Chief Scientist. Once accepted by the Chief Scientist, final reports are submitted to the Oil Spill Public Information Center (OSPIC) where they are reviewed for proper technical formatting, and then made available to the public. As of September 30, 1995, 29 reports were available to the public through OSPIC and other libraries around the state. (See **Attachment C** for a list of libraries, and a list of reports available as of today). An additional 15 reports were undergoing formatting review at OSPIC.

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

Status of 1992 Project Reports as of September 30, 1995

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

Trustee Agencies

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

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

76	49	24	3
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Status of 1993 Project Reports as of September 30, 1995

A total of 37 projects were funded in the 1993 Work Plan. With some exceptions, a final report -- that is, a report that is subject to peer review and approval by the Chief Scientist -- is required on each 1993 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.)

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

25	13	9	3
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Status of 1994 Project Reports as of September 30, 1995

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

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

35	5	12	18
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Your action directing me to withhold authorization of FY 96 funds until FY 94 reports were submitted proved to be a very effective motivator for PIs with late reports. In addition to the four FY 94 reports reflected in this memo as having been submitted during the last quarter, ten additional FY 94 reports were submitted just after the end of the quarter. They will be counted in the December quarterly report.

Status of 1995 Projects as of September 30, 1995

Because reports on FY 95 projects are not due until April 15, 1996, the FY 95 status report focuses on project activity conducted during the quarter. Information provided by the agency liaisons indicates that for virtually all projects the field season was successfully completed and data analysis is now underway. Planning continued for workshops on seabird restoration (Project 95038) and the status of shoreline oiling (Project 95266), and a toll-free resource abnormalities hotline was established at the Alaska Department of Fish and Game. During September, several PIs presented papers or posters on their research findings at the American Academy for the Advancement of Science/Arctic Division meeting in Fairbanks. A student working on the harbor seal project (95001) won "Best Student Paper" at the meeting for his work on this project.

Conclusion

I continue to believe that, in most cases, an adequate effort to complete project reports is being made. As indicated in the tables in this memo, an additional nine reports have been accepted by the Chief Scientist since the June 30, 1995 quarterly report, for a total of 76 accepted reports. This represents a substantial effort on the part of the agencies, the PIs, and the Chief Scientist. Furthermore, 29 reports are now available to the public through OSPIC, a noteworthy increase over the eight reports available to the public at the time of the June quarterly report.

To better ensure the timely submittal of reports in the future, beginning with the FY 97 project proposal cycle, annual reports for the previous year will be required to be submitted at the same time as Detailed Project Descriptions (DPDs) for the upcoming year (both will be due on April 15, 1996). DPDs will not be reviewed or evaluated unless they are accompanied by the annual report. This strategy should also prove useful to the Chief Scientist and peer reviewers, who will be able to evaluate DPDs in the context of the previous year's progress and findings.

ATTACHMENT A

Summary of Final Report Status as of September 30, 1995

1992 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	3	1	0	2	0
ADFG	26	1	10	15	9
ADNR	1	0	0	1	0
DOI	33	0	5	28	9
NOAA	12	1	4	7	1
USFS	2	0	0	2	0
TOTAL	77	3	19	55	19

1993 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	2	0	1	1	1
ADFG	13	2	4	7	3
ADNR	0	0	0	0	0
DOI	10	2	3	5	3
NOAA	3	1	1	1	0
USFS	2	0	0	2	1
TOTAL	30	5	9	16	8

1994 WORK PLAN

AGENCY	NUMBER OF REPORTS	Not Yet Submitted to Chief Sci.	In Progress	Accepted by Chief Scientist	Available to Public at OSPIC
ADEC	1	1	0	0	0
ADFG	20	10	10	0	0
ADNR	2	1	0	1	0
DOI	5	0	1	4	2
NOAA	5	3	2	0	0
USFS	4	1	3	0	0
TOTAL	37	16	16	5	2

ATTACHMENT B

Summary of Reports Significantly Behind Schedule as of November 13, 1995

ADEC

Reports Not Yet Submitted to Spies

94266	PI resigned; now Piper	Shoreline assessment
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ADFG

Reports Not Yet Submitted to Spies

FS01	Fried/Bue	Spawning area injury
94166	Wilcock	Herring spawn deposition
94279	Miraglia	Food safety testing
<u>Peer Reviewed and Returned to P.I. for Revision 6 or More Months Ago</u>		
B11	Rothe	Harlequin duck
FS13	Baker	Hydrocarbons on bivalves

DOI

Reports Not Yet Submitted to Spies

93006	Birkedahl	Site specific archaeology
93033	Rothe	Harlequin duck restoration
<u>Peer Reviewed and Returned to P.I. for Revision 6 or More Months Ago</u>		
B08	Irons	Kittiwake damage assessment

NOAA

Peer Reviewed and Returned to P.I. for Revision 6 or More Months Ago

ST1A	O'Clair	Subtidal sediments
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Extended Submission Dates Agreed to by Executive Director and Chief Scientist

ADNR

94007	Reger	Archaeological restoration	Due 11/30/95
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ADFG

94258	Schmidt	Sockeye overescapement	Due 11/29/95
94320D	Seeb	Pink salmon genetics	Due 12/15/95

NOAA

ST8	Short	Sediment data synthesis	Due 12/31/95
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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
October 1995**

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

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

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

Anchorage Copy Centers:

Clay's Printing - (907) 561-6270

TimeFrame - (907) 562-3822

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

FINAL REPORTS

October 1995

Natural Resource Damage Assessment Studies

* = new additions to this list.

Fish/Shellfish 4

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

Fish/Shellfish 4A

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

Fish/Shellfish 7B and 8B

Swanton, C.O., T.J. Dalton, B.M. Barrett, D. Pengilly, K.R. Brennan, and P.A. Nelson. 1993. Effects of pink salmon (*Oncorhynchus gorboscha*) 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 27

Schmidt, D.C., K.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M.

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

Fish/Shellfish 30

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

Marine Mammal 5 (Restoration Study 73)

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

Marine Mammal 6-1

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

Marine Mammal 6-5

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

Marine Mammal 6-7

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

Marine Mammal 6-9

Doroff, A.M., and A.R. DeGange. 1995. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill

State/Federal Natural Resource Damage Assessment Final Report (Marine Mammal Study Number 6-9), U.S Fish and Wildlife Service, Anchorage, Alaska.

Marine Mammal 6-12

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

Marine Mammal 6-13

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

Marine Mammal 6-14

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

Marine Mammal 6-18

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

Marine Mammal 6-19

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

Restoration Study 47

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

Restoration Study 60C

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

*Restoration Study 102

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

Restoration Study 106

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

*Subtidal Study 2B/Air Water 2

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

Subtidal Study 5

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

Subtidal Study 6

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

Restoration Projects

* = new additions to this list.

93003

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

93017

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

*93034

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

*93045

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

*93047

Jewett, S.C., and T.A. Dean, R.O. Smith, M. Stekoll, L.J. Haldorson, D.R. Laur, and L. McDonald. 1995. The Effects of the *Exxon Valdez* oil spill on shallow subtidal communities in Prince William Sound, Alaska 1989-93, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93047), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

93051

Sundet, K., M.N. Kuwada, and J. Barnhart. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93051), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

*93051B

Kuletz, K.J., D.K. Marks, N.L. Naslund, N.G. Goodson, and M.B. Cody. 1994. Information needs for habitat protection: marbled murrelet habitat identification, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93051B), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

93051B - Forest Service Component

DeVelice, R.L., C. Hubbard, M. Potkin, T. Boucher, and D. Davidson. 1995. Characterization of upland habitat of the marbled murrelet in the *Exxon Valdez* oil spill area, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93051B, Forest Service Component), USDA Forest Service, Chugach National Forest, Anchorage, Alaska.

*94159

Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of Prince William Sound, Alaska: trends following the *T/V Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 94159), U.S Fish and Wildlife Service, Anchorage, Alaska.

*94173

Hayes, D.L. 1995. Recovery monitoring of pigeon guillemot populations in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 94173), U.S Fish and Wildlife Service, Anchorage, Alaska.

Exxon Valdez Oil Spill Project Status Summary
1995 Work Plan
Quarter Ending September 30, 1995

<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorize</u>	<u>Project Activity this Quarter</u>	<u>Comments</u>
95001	Condition and Health of Harbor Seals	ADFG	On file/review complete	CE on file	On file	Blood tissue and morphometric samples from harbor seals collected inside and outside PWS. Most of the blood work has been completed and the morphometric data is already in the database. Brian Fadely won the "best student paper" at the AAAS meeting for his work on this project.	
95007A	Archaeological Site Restoration - Index Site Monitoring	ADNR	On file/review complete	CE on file	On file	Seven archaeological sites monitored.	Project includes report writing for 94007.
95007B	Archaeological Site Restoration	USFS	On file/review complete	EA/FONSI on file (93006, 94007)	On file	Field work completed. Pollen and organic material being analyzed in lab or carbon dated as appropriate.	
95009D	Survey of Octopus and Chiton in Intertidal Habitats	USFS	On file/review complete	CE on file	On file	Intensive field season. Dives began in northeast PWS at Orca Inlet and went on to Tatitlek and toward Chenega. Data has been entered into spreadsheets and analysis is continuing.	
95012	Comprehensive Killer Whale Investigation	NOAA	On file/review complete	CE on file	On file	NOAA component: Subcontract awarded for stable isotope and fatty acid analysis; analysis underway. RFP component: Field season completed. The 5 whales reported missing from AB pod last year are still missing and considered mortalities. The subgroup of AB pod has been photographed swimming with AJ pod for the second year. This very unusual circumstance is another unique change that has occurred within AB pod since the time of the spill.	

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Exxon Valdez Oil Spill Project Status Summary
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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>DPD Status</u>	<u>NEPA Status</u>	<u>Exec Dir Authorize</u>	<u>Project Activity this Quarter</u>	<u>Comments</u>
95021	Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands	DOI (NBS)	On file/review complete	CE on file	On file	Implanted 15 transmitters July 16-18 in birds from East Amatuli (10 common murres) and West Amatuli (5 tufted puffins) islands. Location data are being obtained from Argos at 2-4 day intervals on-line, and at monthly intervals on tape. As of October 16, 987 individual bird locations had been obtained from transmitters deployed at the Barren Islands.	
95025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI	On file/review complete	CE on file	On file	Sea urchin, crab, benthic and schooling fish and benthic mollusk sampling design/methods evaluated through preliminary sampling. Shallow subtidal substrates mapped using side-scan-sonar. Body measurements taken on 267 harlequin ducks; 96 transmitters implanted. Aerial and skiff surveys of sea otters conducted. Six sea otters captured to obtain blood samples for evaluation of proposed immune function and biomarker assay methods. Preliminary samples of subtidal clams and subtidal/intertidal invertebrate predators taken. Work also began in blue mussel component of project.	
95025A	Nearshore Package: Project Planning and Development	DOI (NBS)	On file/review complete	CE on file	On file	See 96025.	
95026	Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data	ADEC	On file/review complete	CE on file	On file	RSA in place and PI has been integrating the microbial and chemical data.	Project delayed one month due to delay in processing RSA.
95027	Kodiak Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC	On file/review complete	CE on file	On file	Second cruise completed (July); results being evaluated.	

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95029	Population Survey of Bald Eagles in PWS	DOI (FWS)	On file/review complete	CE on file	On file	Field surveys completed; data being analyzed and report being drafted.	
95031	Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS	DOI (FWS)	On file/review complete	CE on file	On file	Data being analyzed for draft report.	
95038	Symposium on Seabird Restoration	DOI (FWS)	On file/review complete	Not applicable	On file	Planning continued for workshop scheduled for October 1-3, 1995.	
95039	Common Murre Productivity Monitoring	DOI (FWS)	Report writing only; no DPD required	Not applicable (report writing only)	On file	Data being analyzed for draft report.	
95041	Introduced Predator Removal from Islands - Follow-up Surveys	DOI (FWS)	On file/review complete	EA/FONSI on file (94041)	On file	Data being analyzed for draft report.	
95043B	Carry-forward: Cutthroat and Dolly Varden Rehabilitation in Western PWS	USFS	On file/review complete	EA/FONSI on file	On file	Project work done at Otter, Gunboat (Gumboot), Red and Billy's Hole. At Gumboot Creek, installed 9 habitat structures, completed pre and post installation population estimates, and entered mark-recapture information into database; analysis pending. At Otter Creek, installed 21 project habitat structures, completed pre and post fish trapping including mark-recapture, and entered data into database. At Red Creek, conducted initial surveys for structure location and fish use surveys, installed 10 structures, and completed post habitat structure use surveys; data analysis ongoing.	
95052	Community Interaction/Use of Traditional Knowledge	ADFG	On file/review complete	CE on file	On file	Coordination meeting was held in Anchorage with the local facilitators. Another issue of the Subsistence Restoration Newsletter was produced.	

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95058	Landowner Assistance Program	ADFG	On file/review complete	Not applicable	On file	No additional progress on this project as last year's funding ended and future funding was deferred.	
95060	Spruce Bark Beetle Impacts	ADEC	RSA reviewed by Executive Director in lieu of peer review	CE on file	On file	Draft report prepared; undergoing internal review.	
95064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	ADFG	On file/review complete	CE on file	On file	In August conducted arial survey in PWS and put VHF radio tags on flippers of 25 seals in cooperation with biologist from National Marine Mammal Lab in Seattle. In late September, captured 20 seals, sampled them, and mounted satellite tags on 8 of them.	
95074	Herring Reproductive Impairment	NOAA	On file/review complete	CE on file	On file	Sampled four spawning groups of herring from PWS for evaluation of reproductive impairment from age classes older and younger than the spill. Three stocks were sampled in Southeast Alaska as controls. Eggs were returned to ABL; statistical evaluation in progress. Also, toxicity exposures to eggs were conducted. Chromosome observations currently being evaluated by contractor, and this parameter will be used as a potential index of long term damage.	

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95076	Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon	NOAA	On file/review complete	CE on file	On file	Record pink salmon run of 117,000 fish was counted through Sashin Creek weir. Each fish inspected for coded wire tag. Carcass surveys were done on Sashin Creek, and Lover's Cove and Borodino Creeks. Experiment unsuccessful on Sashin because of record run size (not feasible to mark or remove all carcasses). Surveys on Lover's Cove and Borodino continuing. Two dosage levels of oiled gravel and a control were placed into incubation at the wetlab. Samples of gravel and effluent water from incubators analyzed for hydrocarbons. Pink salmon were captured on spawning grounds at Lover's Cove Creek to provide gametes for the experiment. About 500,000 eggs were fertilized and seeded in the experimental incubators; incubation is proceeding.	
95086C	Herring Bay Monitoring and Restoration Studies	ADFG	On file/review complete	CE on file	On file	Final field trip to Hering Bay was completed on September 2, and all ongoing experiments were terminated and removed from the field. Approximately 95% of all samples have been sorted and processed and approximately 95% entered into the database. Data analysis will begin next quarter.	
95089	Information Management System	ALL	No DPD required	Not applicable	On file		

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95090	Mussel Bed Restoration and Monitoring in PWS and Gulf of Alaska	NOAA	On file/review complete	CE on file	On file	Completed 10-day vessel cruise to monitor mussel bed restoration activities of summer 1994. Visually the oil is reduced at all sites that were manipulated last summer. Another field trip, via aircraft, took place in August primarily to monitor non-manipulated mussel beds. Hydrocarbon samples are being analyzed.	
95093	PWSAC: Restoration of Pink Salmon Resources and Services	ADFG	Planning funds only; no DPD required	Not applicable	On file	Continued project planning.	
95100	Administration, Science Management and Public Information	All	No DPD required	Not applicable	On file		
95102-CLO	Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound	DOI (FWS)	Report writing only; no DPD required.	Not applicable (report writing only)	On file	Redraft of report submitted to Chief Scientist August 16, 1995.	
95106	Subtidal Monitoring: Eelgrass Communities	ADFG	On file/review complete	CE on file	On file	Field work completed, 1/3 of samples processed. Hydrocarbon samples shipped to Auke Bay Lab and awaiting processing.	
95110-CLO	Closeout: Habitat Protection and Acquisition	ADNR	No DPD required	Not applicable	On file	Small Parcel Evaluation and Ranking Supplement completed July 15, 1995.	
95115	Sound Waste Management Plan	ADEC	RFP reviewed by Executive Director in lieu of peer review	CE on file	On file	Drafts of November deliverable in review.	
95117-BAA	Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation	NOAA	On file/review complete	CE on file	On file	Samples collected and being analyzed.	

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95121	Fatty Acid Signatures of Selected Forage Fish Species in PWS	NOAA	Contractual; Spies will review statement of work in lieu of DPD	CE on file	On file	Contract awarded. Sample analysis will take place when samples arrive at contractor's lab.	
95126	Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	Work continues in support of both large and small parcel negotiations including appraisals, title work, hazardous materials assessments, mapping of parcels as parcel configurations are refined and additional work as needed by negotiators.	
95126A	Carry-forward: Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	See 95126.	
95127	Tatitlek Coho Salmon Release Program	ADFG	No DPD required (NEPA only)	Not applicable	On file	EA/FONSI complete.	
95131	Clam Restoration (Nanwalek, Port Graham, Tatitlek)	ADFG	On file/review complete	CE on file	On file	Beach sampling complete. Draft EA submitted to NOAA for review.	
95137-CLO	Closeout: Prince William Sound Salmon Stock Identification and Monitoring Studies	ADFG	Report writing only; no DPD required	Not applicable (report writing only)	On file	Project is report writing funds for 93068 and 94137. See 94137 for status.	

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95138	Elders/Youth Conference	ADFG	On file/review complete	CE on file	On file	Conference held late September with representatives participating from all communities in the spill area except Tatitlek, which was weathered out. Issues included: call for a Native Trustee to be added to the Trustee Council, changes to EVOS settlement decree allowing for restoration of human mental health, and another conference focused on healing. A steering committee was appointed to follow up on recommendations made at the conference.	
95139	Wild Stock Supplementation Workshop	ADFG	No DPD required	Not applicable	On file	Workshop conducted January 12-13, 1995.	
95139A1	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Little Waterfall Creek Barrier Bypass	ADFG	On file/review complete	CE on file (94139A1)	On file	Construction plans are final, contractor is selected, mobilization is in progress.	
95139A2	Port Dick Spawning Channel	ADFG	On file/review complete	EA in preparation	On file	Monitoring environmental parameters, developing contract specifications for site development, preparing draft EA.	
95139B	Closeout: Otter Creek/Shrode Creek Instream Restoration	USFS	Report writing only; no DPD required	Not applicable (report writing only)	On file	Project is close-out/report writing for 94139B1 and B2. See 94139B1 and B2 for status.	
95139C1	Montague Riparian Rehabilitation	USFS	On file/review complete	CE on file	On file	Evaluated project for stability, design function and effectiveness in providing improved stream habitat. Vegetation thinning evaluated and permanent plots established.	

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95139C2	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Lowe River	ADFG	No DPD will be prepared (project delayed until FY 96)	Not applicable (project delayed)	Not applicable	No further work in Lowe River drainage at this time. Transferred funds to other 95139 projects (Little Waterfall Creek and Port Dick).	
95163A	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (interim funding)	NOAA	No DPD required (is close-out of FY 94 work)	Not applicable	On file	Project is funding for close-out of FY 94 work. See 94163 for status.	
95163A1	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (APEX)	NOAA	On file/review complete	CE on file	On file	Cruise FOR95-1 (7/20/95-8/12/95) was a joint effort by scientists at UAF, NMFS, and USFWS to understand how the distribution and abundance of forage fishes affects piscivorous birds in PWS. Objectives of the cruise were to conduct a hydroacoustic survey, observe the distribution of birds in relation to forage species, collect samples of acoustic targets to describe species composition and size distributions, and collect selected species for related studies by other investigators. The second and final FY 95 cruise is scheduled for 10/8/95-10/15/95.	
95163B	Foraging of Seabirds (APEX)	DOI	On file/review complete	CE on file	On file		
95163C	Fish Stomach Contents Analysis (APEX)	NOAA	On file/review complete	CE on file	On file	Currently analyzing summer 1994 sand lance and capelin. Spring and fall samples have been analyzed. Field collections for FY95 currently underway.	
95163D	Tufted Puffin Foraging and Reproductive Success (APEX)	DOI	On file/review complete	CE on file	On file	Data analysis and report writing underway.	

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95163E	Reproduction and Foraging of Black-legged Kittiwakes (APEX)	DOI (FWS)	On file/review complete	CE on file	On file	Field work complete.	
95163F	Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding)	DOI (FWS)	Report writing only; no DPD required.	Not applicable (report writing only)	On file	Final report accepted by Spies; not yet at OSPIC.	
95163F1	Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX)	DOI	On file/review complete	CE on file	On file	Field work complete.	
95163G	Seabird Energetics (APEX)	NOAA	On file/review complete	CE on file	On file	Entered field and began energetics work with pigeon guillemots, puffins, and kittiwakes in late July. Contractor completed field activities by September 1995. Analysis of data now in progress.	
95163I	Seabird/Forage Fish Interaction: Program Management and Integration	DOI (FWS)	On file/review complete	CE on file	On file	Statistical consultant hired (Lyman McDonald).	
95163J	Barren Islands Seabird Studies (APEX)	DOI	On file/review complete	CE on file	On file	Data being analyzed for draft report.	
95163K	Using Predatory Fish to Sample Forage Fish (APEX)	DOI	On file/review complete	CE on file	On file	Data being analyzed for draft report.	
95163L	Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/Distribution of Forage Fish in Barren Islands (APEX)	DOI	On file/review complete	CE on file	On file	Data entry ongoing, preliminary analysis of database on 9000 trawls underway.	
95165	PWS Herring Genetic Stock Identification	ADFG	On file/review complete	CE on file	On file	Bids for contract genetics work awarded to Dalhousie University and University of Washington. Samples have been sent; analysis has begun.	

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95166	Herring Natal Habitats	ADFG	On file/review complete	CE on file	On file	Preparing for field sampling during October. Sample processing is complete. Preliminary data analyses are on schedule.	
95191A	Investigating and Monitoring Oil Related Egg and Alevin Mortalities	ADFG	On file/review complete	CE on file	On file	Contract with UAF and New York University completed. Little Port Walter sampling completed.	
95191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA	On file/review complete	CE on file	On file	Over 340 coded-wire tagged pink salmon returned to Little Port Walter in September 1995. Evaluation of dose-related differences in gamete viability is underway.	
95199-CLO	Institute of Marine Science - Seward Improvements EIS	ADFG	No DPD required	FEIS on file (94199)	On file	Project presented to Legislative Budget and Audit Committee September 28, 1995. First installment of funds received from court. Marine construction phase ongoing with the installation of the wet well seawater intake. Continuation of site preparation and utility installation activities.	
95244	Seal and Sea Otter Cooperative Subsistence Harvest Assistance	ADFG	On file/review complete	CE on file	On file	Final workshop was held in Cordova in conjunction with a meeting of the Alaska Native Harbor Seal Commission. Division staff continued mapping of harbor seal harvest locations, completing this work for the Lower Cook Inlet communities. This mapping activity will continue in FY96 for PWS communities.	FY95 results included in report prepared under 94244. See 94244 for status.
95255	Kenai River Sockeye Restoration	ADFG	On file/review complete	CE on file	On file	Adult return sampled and samples being analyzed.	
95258	Sockeye Salmon Overescapement (Kenai/Kodiak)	ADFG	On file/review complete	CE on file	On file	Fall sampling of lakes taking place.	

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95259	Restoration of Coghill Lake Sockeye	ADFG	On file/review complete	EA/FONSI on file (94259)	On file	Limnological surveys were conducted on a 3-week basis, two hydroacoustic tow net surveys were completed, diel sampling of rearing juveniles was conducted. In addition, some of the 1995 fisheries and limnological data were analyzed.	
95266	Experimental Shoreline Oil Removal	ADEC	No DPD required (literature search only)	CE on file	On file	Workshop scheduled for November 1-2, 1995.	
95272	Chenega Chinook Release Program	ADFG	On file/review complete	EA/FONSI on file (94272)	On file	Smolt released mid-June at 20-25g. No BKD outbreak. Smolts in good condition when released from net pens.	
95279	Subsistence Restoration Project - Food Safety Testing	ADFG	On file/review complete	CE on file	On file	Training concluded in all villages except Port Lion (chose not to participate) and Perryville and Ivanoff Bay (due to weather). A toll-free resource abnormalities hotline was set up and advertised. Accounts were set up for transport of samples. Three calls were received. One abnormal sample was received and is being analyzed.	
95285-CLO	Closeout: Subtidal Sediment Recovery Monitoring	NOAA	Report writing only; no DPD required	Not applicable (report writing only)	On file	Hydrocarbon sample analysis underway.	
95290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance for Restoration and NRDA Environmental Samples Associated with the <i>Exxon Valdez</i> Oil Spill	NOAA	On file/review complete	CE on file	On file	All hydrocarbon data has been returned to outside agency investigators, and mussel bed samples collected in FY94 are currently being completed. At this time, there is no backlog of samples.	

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95320A	Salmon Growth and Mortality	ADFG	On file/review complete	CE on file	On file	Preparing for field sampling during October 1995. Data entry complete; preliminary data analyses are on schedule.	
95320B	PWS Pink Salmon Stock Identification and Monitoring (CWT)	ADFG	On file/review complete	CE on file	On file	PI hired. Tagging complete.	Continued as 96186.
95320C	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS	ADFG	On file/review complete	CE on file	On file	Boilers operating; thermal marking taking place.	Continued as 96187.
95320D	PWS Pink Salmon Genetics	ADFG	On file/review complete	CE on file	On file	Proofing data, provided by contractor, from last year's field studies. DNA studies in progress.	Proposed for continuation as 96196.
95320E	Juvenile Salmon and Herring Integration	ADFG	On file/review complete	CE on file	On file	Preparing for field sampling during October 1995. Data entry complete; preliminary data analyses are on schedule.	
95320G	Phytoplankton and Nutrients	ADFG	On file/review complete	CE on file	On file	Performing data and sample analyses from all summer collections and cruises. Collected data on September cruise Presented results at Arctic Division, AAAS meeting in Fairbanks in mid-September.	
95320H	Role of Zooplankton in the PWS Ecosystem	ADFG	On file/review complete	CE on file	On file	Completed oceanography cruise in late September. Completed sample analysis for FY 95 collections. Presented some results at Arctic Division, AAAS meeting in Fairbanks in mid-September.	

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95320I	Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds)	ADFG	On file/review complete	CE on file	On file	Sample collection of both archived and current marine mammals far more successful than anticipated. A large suite of both harbor seal and stellar sea lion samples is now being processed. Preparation for calibration experiments at University of British Columbia currently underway.	
95320I(2)	Isotope Tracers - Food Webs of Fish	ADFG	On file/review complete	CE on file	On file	Interim funding used to complete analysis of FY94 samples and end of calendar year 1994 samples (fall cruises and fall survey). Samples presently at UAF undergoing mass spectrometry. Continuing funding: Collection of 1995 samples, laboratory preparation and mass spectrometry in progress. Preliminary results obtained from mass spec lab. Neocalanus preliminary data presented at Arctic Science Conference at Fairbanks.	

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95320J	Information Systems and Model Development	ADFG	On file/review complete	CE on file	On file	Database: Application Services Interface completed. HDF coding and ingestion of SEA datasets 50% complete. Survey Planning Tool completed. 3-d visualization of temporospatial distribution of pollock and circulation model output completed; visualization across trophic levels underway. Modeling: 3-d wind and tide-driven ocean circulation model for PWS completed and running. Work continues on extension of 1-d nekton model to the 2- and 3-d cases. Communications: SEA Home Page on-line. Presentations: Presented paper on nekton modelling results and poster on ecosystem visualization applications at AAAS meeting in Fairbanks. General: Data ingestion, network administration and system maintenance continue.	
95320K	PWSAC: Experimental Fry Release	ADFG	On file/review complete	EA/FONSI on file	On file	Egg take completed on schedule.	

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95320M	Observational Physical Oceanography in PWS and the Gulf of Alaska	ADFG	On file/review complete	CE on file	On file	Final 1995 cruise completed. Collected CTD, ADCP, and dissolved oxygen data at 25 stations. Retrieved the moored ADCP from Hinchinbrook Entrance; the data from the ADCP and 2 attached CTDs was downloaded for processing. ADCP needed new batteries, so it will not be redeployed until later this year. Also continued collection of data in the tanker traffic lane with 3-4 day cruises in July, August, and September. All '95 CTD data has been processed and analysis has begun; processing and analysis of ADCP data is ongoing. Group members made presentations at the International Association for Physical Sciences of the Oceans conference in August and the AAAS Arctic Division Science Conference in September..	
95320N	Nearshore Fish	ADFG	On file/review complete	CE on file	On file	Prepared for October field operations, including calibration of SONAR gear. Applied electroacoustic calibrations to data collected. Presented 1994 acoustic data and biomass partitioning techniques at AAAS meeting in Fairbanks in September.	
95320Q	Avian Predation on Herring Spawn	USFS	On file/review complete	CE on file	On file	Report developed on results of 1994 work.	

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95320S	Disease Impacts on PWS Herring Populations (competitive solicitation under State of Alaska two-step, RFQ-RFP process)	ADFG	On file/review complete	CE on file	On file	Direct transmission of VHSV from wild to pathogen-free lab reared herring completed. Processing of field samples completed; analyses on schedule. Immunoassay methodology in developmental stage (1-month delay). Analysis of white blood differential cell counts and examination of viral erythrocytic necrosis from field samples completed. Dosing apparatus for oil exposures and swim raceway for performance tests built.	
95320T	Juvenile Herring Growth and Habitat Partitioning	ADFG	On file/review complete	CE on file	On file	Samples were sent to Fisheries Oceanography Lab in Fairbanks for analysis. Presented paper at AAAS meeting in Fairbanks in September.	
95320U	Somatic and Spawning Energetics of Herring/Pollock	ADFG	On file/review complete	CE on file	On file	Samples of juvenile herring from Fall 1994 and Spring 1995 processed down to the dry weight level. Energetic measurements completed on 70% of those herring samples. Adult female herring have been processed for fecundity, and ovarian energetic analysis in progress. Samples of migrating pink salmon fry processed to dry weight level and energetic analysis will begin December 1995.	
95320Y	Variation in Local Predation Rates on Hatchery-Released Fry	ADFG	On file/review complete	CE on file	On file	Field work and volunteer program conducted at five hatcheries in PWS in April, May and June. Data entry and tabulation complete. Data analysis underway.	
95417	Carry-forward: Waste Oil Disposal Facilities	ADEC	No DPD will be prepared (project canceled)	EA/FONSI on file (94417)	Review of RFP on file	Project canceled; all funds lapsed.	

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95422-CLO	Closeout: Restoration Plan EIS/Record of Decision	USFS	No DPD required	FEIS on file (94422)	On file	Project completed.	
95424	Restoration Reserve	All	No DPD required	Not applicable	Not applicable		
95427	Harlequin Duck Recovery Monitoring	ADFG	On file/review complete	CE on file	On file	Field activities complete. One survey in western PWS was missed due to hazardous conditions. Ten broods observed in eastern PWS; no broods observed in western PWS. Preliminary analysis suggest that harlequin ducks in PWS exhibit seasonal variations in total numbers, and sex and age ratios.	
95428-CLO	Closeout: Subsistence Planning Project	ADFG	No DPD required	Not applicable	On file	Project planning efforts continued with emphasis on communities on Alaska Peninsula and Kodiak Island.	FY95 results included in report prepared under 94428. See 94428 for status.
95505B	Data Analysis for Stream Habitat	USFS	Report writing only; no DPD required	Not applicable (report writing only)	On file	Report, which includes results from 93051 and 94505, accepted by Chief Scientist October 13, 1995. Not yet at OSPIC.	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

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94007	Site Specific Archaeological Restoration	ADNR	The results of this project will be presented in two reports (funded under 95007A): (1) Site protection plan submitted to OSPIC September 1995; undergoing formatting review. (2) Annual report on 1994 field season being drafted; will submit to Chief Scientist November 30, 1995.	(1) Bittner, J.E. and D.R. Reger. Spill area site and collection protection plan. ADNR, Anchorage, Alaska. 1995 Monitoring: ADNR monitored seven sites on Shuyak Island and Outer Kenai Coast (including three at Nuka Island) and found oil but no evidence of new disturbance. USFWS monitored six sites on Afognak Island and found no indication of new vandalism. NPS monitored two sites, McArthur Pass in Kenai Fjords National Park and Cape Gull on the Katmai coast, and found no new damage. Data Recovery: USFS began restoration of two sites in PWS: SEW-440 and SEW-448. Site Protection Plans: ADNR compiled information about the need for site protection, with emphasis on adequate curation of collections in the spill area.	Continuation of 93006.
94020	Black Oystercatcher Interaction with Intertidal	DOI	Project is close-out/report writing for 93035.	See 93035.	Close-out/report writing for 9303

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94039	Common Murre Population Monitoring	DOI/FWS	Final report (funded under 95039) submitted to Chief Scientist for peer review September 28, 1995.	Roseneau, D.G., A.B. Kettle, and G.V.Byrd. Common murre restoration monitoring in the Barren Islands, Alaska in 1994. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK In 1994, complete censuses and replicate index plot counts were made at the East Amatuli Island-Light Rock and Nord Island murre colonies. Although a marginally significant increasing trend was found over the 6-year post-spill period at one 2-plot index area at East Amatuli Island-Light Rock, no significant trends were detected in the other 1989-1994 East Amatuli Island-Light Rock and Nord Island population data sets. Productivity was high (0.7 fledglings per nest site) and within normal bounds, compared with other colonies.	Begun as R11; continued as 93022. Close-out/report writing under 95039.

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94041	Introduced Predator Removal from Islands	DOI/FWS	Annual report accepted by Chief Scientist; not yet at OSPIC. [NOTE: Report submitted to OSPIC October 1995; undergoing formatting review.]	<p>Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK.</p> <p>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.</p>	
94043A1	Eshamy River Restoration (W. PWS)	USFS	Project discontinued.		

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94043A2	Gumboot Creek Restoration (W. PWS)	USFS	No report required (NEPA only). [NOTE: Also known as Gunboat Creek.]		
EA completed and decision notice signed July 27, 1995.					
94043A3	Stream No. 508 Restoration	USFS	Project discontinued.		
EA completed and decision notice signed July 27, 1995.					
94043A4	Stream No. 509 Restoration (W. PWS)	USFS	Project discontinued.		
EA completed and decision notice signed July 27, 1995.					
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.	

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94043B2	Rocky Creek/Bay Restoration (Montague)	USFS	Annual report being drafted. [NOTE: Annual report submitted to Chief Scientist for peer review November 3, 1995.]		
94064	Harbor Seal Habitat Use and Monitoring	ADFG	Annual report (which includes results of 94320F) submitted to Chief Scientist August 16, 1995. NOTE: Project also includes report writing funds for 93046.	Frost, K., et al. Habitat use, behavior, and monitoring of harbor seals in PWS, AK. ADF&G. 1995. Twenty-six seals caught and sampled September 1994 (blood, whiskers for stable isotopes, blubber for fatty acids, skin for genetics, measurements). Twelve of these instrumented with satellite-linked time-depth recorders (6 adults, 6 subadults). Aerial surveys conducted during molting period in September. Preliminary survey analysis suggests no marked increase or decrease since 1993. Eight SLTDRs functioning on 11/10/94. Most seals remain local in PWS; one subadult in Gulf of Alaska.	Started as MM5; continued as R73, 93046, and 95064.
94066	Harlequin Duck Recovery Monitoring	ADFG	Project is close-out/report writing for 93033.	See 93033.	Close-out/report writing for 93033.

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94086	Herring Bay Experimental and Monitoring Studies	ADFG	Annual report submitted to Chief Scientist August 30, 1995; under peer review.	Four field trips were conducted in 1994 for data and sample collections. Field activities in 1994 included data collections for population dynamics, barnacle recruitment, and water circulation studies. Laboratory analyses are continuing for mussel size-frequency distribution and mussels in filamentous algae samples collected in 1994.	Population dynamics portion of 93039.
94090	Mussel Bed Restoration and Monitoring	NOAA	Annual report being drafted. [NOTE: Annual report submitted to Chief Scientist and OSPIC October 6, 1995.]	Babcock, M. Recovery monitoring and restoration of oiled mussel beds in PWS, AK. NOAA, Juneau, AK Analysis of sediments collected April/May 1994 resulted in selection of 16 oiled mussel beds for restoration. Twelve mussel beds were cleaned and restored in 1994. Sediment chemistry completed; chemical analyses of mussels in process. Several sites identified as being impacted by EVOS were resampled this year.	CH1B and 93036. Continued as 95090.

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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	Report accepted by Chief Scientist. Not yet at OSPIC.	Kuletz, K.J., D.K. Marks, R. Burns, and L. Prestash. Marbled murrelet foraging patterns and habitat use during the breeding season in PWS. Forty-seven murrelets were radio-tagged. Foraging ranges were obtained by tracking birds with boats and planes. Birds foraged up to 60 kms. from their nests (average 10 km.). The average distance from shore was 0.6 km.	R15, 93051, 95102
94110	Habitat Protection - Data Acquisition and Support	ADNR	No report required.	See Habitat Protection Working Group, "Comprehensive Habitat Protection Process; Large Parcel Evaluation and Ranking" Volumes I and II (November 2, 1994 Supplement). Work on supplement to Large Parcel Evaluation and Ranking completed November 2, 1994. Work completed on the Small Parcel Evaluation and Ranking, Phase 1. Final document released February 13, 1995 under project 95110-CLO.	Close-out under 95110-CLO.

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94126	Habitat Protection and Acquisition Fund	ADNR	No report required.		94110
				Work continues in support of large parcel negotiations, including appraisals, title work, hazardous materials assessments, mapping of parcels under negotiation, and additional work as needed by negotiators.	
94137	Stock Identification of Chum, Sockeye, Chinook, and Coho in PWS	ADFG	Report, (funded under 95137) which will include results of 93068, being drafted. [NOTE: Draft final report (funded under 95137), incorporating results from 93068, submitted to Chief Scientist October 13, 1995.]		Evolved from FS03; continued as 93068 and 95137.
				FY94 work effort: 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. Analysis of tag recovery is expected by end of November 1994.	
94139A1	Waterfall Creek Bypass Instream Restoration	ADFG	No report required (project carried forward as Project 95139A1).		94043, carried forward as 95139A1

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94139A2	Port Dick Spawning Channel	ADFG	No report required (project carried forward as 95139A2).		
94139B1	Otter Creek Bypass Instream Restoration	USFS	Annual report submitted to Chief Scientist May 18, 1995; under peer review. [NOTE: Annual report accepted by Chief Scientist October 1995. Not yet 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	95139B
Otter Creek bypass rehabilitation completed.					
94139B2	Shrode Creek Bypass Instream Restoration	USFS	Annual report submitted to Chief Scientist May 18, 1995; under peer review. [NOTE: Annual report accepted by Chief Scientist October 17, 1995. Not yet 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	95139B
Shrode Creek bypass renovation completed.					

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94139C1	Montague Island Chum Instream Restoration	USFS	Annual report submitted to Chief Scientist May 18, 1995; under peer review.	Schmid, D., et al. 1995. Montague Island chum salmon restoration. USDA Forest Service, Chugach N.F., Cordova, AK Project completed for three streams on Northern Montague Island. This project completed 32 structures and 15 acres of thinning. For initial monitoring results, see "Montague Island Chum Salmon Restoration", 1994 Project Report, USFS Cordova Ranger District.	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	Report approved by OSPIC; available to public.	Agler, B.A., S.J. Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of PWS, Alaska: Trends following the T/V <i>Exxon Valdez</i> oil spill. 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.

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94163	Forage Fish Influence on Recovery of Injured Species	NOAA, ADFG	<p>The results of this project will be presented in two reports:</p> <p>(1) <u>NOAA</u>: Annual report accepted by Chief Scientist September 26, 1995. [NOTE: Report submitted to OSPIC October 6, 1995; undergoing formatting review.]</p> <p>(2) <u>ADFG</u>: All samples have been laboratory processed and preliminary analyses have been completed; annual report being drafted. [NOTE: Annual report submitted to Chief Scientist October 3, 1995.]</p>	<p>(1) Tyler, A., et al. Forage fish study in PWS, AK. UAF/NMFS. Appendix by B. Ostrand, USFWS/DOI.</p> <p>(2) Willette, M.</p> <p><u>NOAA</u>:</p> <p>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.</p> <p>November cruise: (a) Temperature-depth profiles for open areas of PWS showed surface temperature 7.0C, warming to 9.0C at 50m depth. Water cooled to 5.0C with further increase in depth. Salinity gradually increased through this depth range, indicating little mixing of the water column and that cooling was occurring from the surface downward due to cold air temperatures. Over the shallow shelf areas the profiles were different, being at 8.0C and mixed to 70m.</p> <p>(b) Five stations were sampled for invertebrate forage species, with euphausiids the abundant crustacean at most stations. (c) Hydroacoustic analysis showed fish mainly located above the temperature maximum at depths of 20 to 40 meters (net sampling showed these fish were young herring mixed with young pollock). Hydrographic data indicated fish aggregations were at temperatures of 7.0 to 7.5C. A second layer of fish was seen near the bottom (likely adult pollock).</p> <p><u>ADFG</u>: Survey for collection of stomach samples was conducted 8/27-9/9/94. Approximately 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.</p>	Integrate with Projects 94320 (PWS System Investigation), 94102 (Murrelet Prey), and 94173 (Pigeon Guillemot).

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94165	Herring Genetic Stock Identification in Prince William Sound	ADFG	Project deferred to FY 95 (95165).		95165
				Collection schedule disrupted by run failure. RFP to be issued as soon as possible to analyze the samples that have been collected and to finish the work in spring 1995.	
94166	Herring Spawn Deposition and Reproductive Impairment	ADFG, NOAA	The results of this project will be presented in two reports: <u>(1) ADFG</u> - Laboratory and data analysis complete. Annual report being drafted. <u>(2) NOAA</u> - Annual report being drafted; hydrocarbon analysis in progress. [NOTE: Annual report submitted to Chief Scientist and OSPIC October 25, 1995.]	(1) (2) Carls, M. Impact of exposure of adult pre-spawn herring on subsequent progeny. Adult herring biaccumulated hydrocarbons, including ovarian tissue and ova. Adults were stressed by oil when VHS was present; VHS prevalence was correlated with PAH concentration. Eggs and larvae were not impacted by parental exposure to hydrocarbons. Factors unaffected included egg fertility, time of hatch, survival, larval stage at hatch, swimming ability, morphology, chromatid separation, and number of mitotic figures.	Coordinating with USFS regarding avian predation (94320Q).

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

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94191	Oil Related Egg and Alevin Mortalities	ADFG, NOAA	<p>The results of this project will be presented in two reports:</p> <p>(1) <u>ADFG</u> - Annual report being drafted.</p> <p>(2) <u>NOAA</u> - Annual report submitted to Chief Scientist June 13, 1995; under peer review. [NOTE: Report accepted by Chief Scientist October 9, 1995.]</p> <p>NOTE: Project also includes report writing funds for 93003.</p>	<p><u>ADFG</u> - Collected gametes from 8 controlled and 8 oiled streams. These eggs are now being incubated and will be completed by December 31, 1994, for analysis in 1995.</p> <p><u>NOAA</u> - 1992 brood died from bacterial kidney disease. 1993 brood emerged from incubators by 5/15/94. 18,000 fish were coded wire tagged and released May 1994; 14,000 fish were retained for PIT tagging later in the summer. Dose-related differences in growth and size of 1992 brood year observed in October 1993 were not as apparent in April 1994. Embryo survival to the development of the eye and emergence from substrate were measured in 1993 brood year, and clear relationship was observed between dose and survival to both developmental stages. During emergence period, inspected over 50,000 newly emerged fry for visible lesions and observed a dose relationship with the proportion of fish displaying edema.</p>	Began as FS02 and R060C; continued as 93003.

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94199	Institute of Marine Science - Seward Improvements	ADFG	No report required.		Continued as 95199-CLO.
				Record of Decision signed by DOI, DOA (USFS), and NOAA October 31, 1994. Capital funding approved by Trustee Council November 2, 1994, subject to executive director's approval.	
94217	Prince William Sound Area Recreation Implementation	USFS	Project is close-out/report writing for 93065.	See 93065.	Close-out of 93065.
94244	Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance	ADFG	Annual report being drafted.	Fall, Jim	Continued as 95244.
				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 draft report on harbor seal and sea otter restoration was completed and distributed for internal review. A second workshop took place on March 2, 1995.	

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94246	Sea Otter Recovery Monitoring	DOI	Project is close-out/report writing for 93043.	See 93043.	Close-out/report writing for 93043.
94255	Kenai River Sockeye Salmon Restoration	ADFG	Annual report submitted to Chief Scientist May 19, 1995; under peer review. [NOTE: Annual report accepted by Chief Scientist October 17, 1995. Not yet at OSPIC.]		Began as R53; continued as 93012 and 93015.
94258	Sockeye Salmon Overescapement	ADFG	Annual report being drafted; due November 29, 1995. 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.

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94259	Coghill Lake Sockeye Salmon Restoration	ADFG	Annual report submitted to Chief Scientist May 19, 1995; under peer review. [NOTE: Annual report accepted by Chief Scientist October 19, 1995.]	Edmundson, J.A., et al. Restoration of Coghill Lake Sockeye Salmon: 1994 Annual Report on Nutrient Enrichment.	Began as 93024.
				Limnology and hydroacoustic sampling completed for this year. Analysis in progress. 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.	
94266	Shoreline Assessment and Oil Removal	ADEC	Final report being drafted.		
94272	Chenega Chinook Release Program	ADFG	Annual report submitted to Chief Scientist December 30, 1994; under review.		Continuation of 93016.
				50,300 chinook smolts released at Crab Bay on 5/27/94. Chenega residents reared and fed smolts in net pens prior to release. PWSAC staff instructed Chenega Natives as to proper fish culture methods.	

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94290	Hydrocarbon Data Analysis and Interpretation	NOAA	No report required.		Continuation of ST8 and 93053. Continued as 95290.
				In FY94, 2,742 samples were received and several hundred were submitted for analysis. Conversion of database to Oracle, the standard agency database, is complete. This will allow access to anyone with security clearance.	
94320A	Salmon Growth and Mortality	ADFG	Annual report submitted to Chief Scientist as part of consolidated SEA-94 report on April 15, 1995; under peer review.		
				Growth rate of juvenile pink salmon in 1994 in PWS slightly above average compared to 1989-1993 period. Presently analyzing growth/survival data for PWS pink salmon with emphasis on effects of number of juvenile salmon released.	

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94320B	Coded Wire Tagging Recovery-PWS Pinks	ADFG	Annual report submitted to Chief Scientist June 30, 1995; under peer review. [NOTE: Annual report accepted by Chief Scientist October 13, 1995. Not yet at OSPIC.]	Sharr, S., et al. Coded wire tag recoveries from pink salmon in PWS salmon fisheries. ADF&G. 1994.	Continued as 96186.
				Common property fisheries: 26.2 million caught, 4.4 million scanned (17%), 3,600-4,000 tags recovered. Hatchery revenue sales: 10.4 million caught, 2 million scanned (19%), 1,600 tags recovered. Scanned close to 100% of brood stock from PWS salmon hatcheries. Used results of in-season analysis, based on detection of tags, for critical management decisions regarding fishing areas and times. Ability to detect wild stock shortfalls and high abundance of hatchery fish contributed to meeting restoration goals.	
94320C	Otolith Mass Marking of PWS Pink Salmon	ADFG	Annual report submitted to Chief Scientist March 31, 1995; under peer review.		Continued as 96188.
				Feasibility study initiated at PWSAC Cannery Creek Hatchery. Approximately 50,000 fry were immersed for different lengths of time and at different temperatures to determine optimum treatment for marking effectiveness and survival. Completed examination of otoliths subjected to varying levels of oxytetracycline and varying temperatures at ADFG lab. Marking was not successful for any of the treatment groups.	

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94320D	Pink Salmon Genetics	ADFG	Report being drafted. Will be submitted by December 15, 1995.		94184, 94191
				In ADFG lab, DNA data show upstream and intertidal spawners in the same stream genetically differ. Have also found that mainland and island populations genetically differ.	
94320E	Salmon Predation	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.		
				Walleye pollock, adult pink salmon, Pacific herring, and dolly varden trout identified as important predators on juvenile salmon in Prince William Sound. FY 94 results have been analyzed to develop study design for FY 95 effort that is expected to significantly improve hypothesis testing capability.	

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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. First prey samples currently being analyzed.	94064. Combined with 95064 for 1995.
94320G	Phytoplankton and Nutrients	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	1994 field work concluded on 9/29/94. Analyzed all water samples (for nutrients, chlorophyll, phaeopigments, particulate C & N, dissolved oxygen, temperature and salinity) except for MV <i>Bering Explorer</i> cruise that just ended. Continued work on phytoplankton species identifications for samples from Lake Bay, Ester Island.	

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94320H	Role of Zooplankton in PWS Ecosystem	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.		95320H
				Time series of zooplankton biomass tracks predation on 0-class fish in April, May, and June.	
94320I	Food Web Dependencies in PWS Ecosystem/Stable Isotopes	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	<u>Food Web of Fishes</u> - Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations). <u>Marine Mammal Trophic Energetics</u> - Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker.	

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94320J	Information Systems and Model Development	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Repeater installation was completed and modified at two sites and further design work was completed for the HERO site at Hinchinbrook Entrance. Field testing indicated a need for design modifications to radio transmitter power levels, and flaws were discovered in some radio equipment. Reengineering by the supplier and delivery of replacements is complete for the core repeater sites on the eastern side of PWS. Approval was secured for use of the USFS repeater site on Naked Island and the repeater installed. The core PWS packet-radio repeater system is now completed and functional. This completes the last of the FY 94 tasks for this project.	
94320K	PWSAC-Experimental Fry Release	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under review.	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.	

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94320L	PWSAC-Experimental Manipulation	ADFG	Annual report submitted to Chief Scientist December 22, 1994; under review.		
				Adult fish will return in 1995. Marine survivals will be estimated for returning adults.	
94320M	Physical Oceanography in PWS and Gulf of Alaska	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.		
				Analysis of CTD and ADCP from the 1994 field season is ongoing. A publication was submitted to the peer reviewed journal <i>Global Atmosphere and Ocean System</i> , titled Circulation and Hydrography in PWS, Alaska during the Spring, Summer and Fall of 1994.	

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94320N	Nearshore Fish	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	The 1994 field season yielded over 1,000 bioacoustic data sets, which require several stages of analysis. For data management purposes, all raw data sets have been filed, and most entered into an electronic log. A majority of the post-processing software has been written, including programs to perform electroacoustic transforms, classify biological targets, and relate trawl catches to acoustic scatter. Scientists have been trained on use of the Sun workstations so that post-processing has been initiated.	
94320P	SEA Program: Program Management	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.		All subprojects of 94320.
94320Q	Avian Predation on Herring Swan	USFS	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Bishop, M.A. 1995. Avian predation on herring spawn. Copper River Delta Institute, USDA Forest Service, Cordova, AK	95320Q

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94320S	Disease Impacts on Herring	ADFG	Annual report submitted to Chief Scientist July 6, 1995; under peer review.	<i>Ichthyophonus hoferi</i> , viral hemorrhagic septicemia virus, and other causes of morbidity in Pacific herring spawning in PWS in 1994. ADFG.	
				Because of the important of <i>Ichthyophonus</i> in herring morbidity in 1994, all previous Pacific herring sampled from PWS and submitted to UC Davis (1989, 1990, 1991, 1992) were re-screened for <i>Ichthyophonus</i> . Prevalence in these samples was never more than 15% and was distributed fairly evenly among liver, kidney, and spleen, but was never in the olfactory nares.	
94417	Waste Oil Disposal Facilities	ADEC	No report required (project carried forward as 95417).		95417

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94422	Environmental Impact Statement for the Draft Restoration Plan	USFS	No report required.	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. FEIS distributed; additional copies available through OSPIC.	Continued as 95422.
94423	Oil Spill Public Information Center (OSPIC)	ALL	No report required.	During the quarter ending 9/30/95, OSPIC staff received 408 visitors, responded to 665 requests for information, processed 52 interlibrary loans, loaned 30 items, distributed 972 documents, and acquired 2 books, 5 reports, 4 periodicals, and 5 videos. 538 documents were added to the Trustee Council Administrative Record and 33 Marine Ecosystem posters were sold. OSPIC staff received 9 NRDA/ Restoration Project final reports, approved 16, and distributed final copies of 14 reports to libraries, copy centers, and NTIS. OSPIC staff expanded the World Wide Web Home Page to include scanned images of 20 slides, registered the Home Page with 10 Web search engines, and linked the Page to 4 other related Web sites.	

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94424	Restoration Reserve	ALL	No report required.		
				At its December 2, 1994 meeting, the Trustee Council voted to place \$24 million into a Restoration Reserve fund within the court registry investment system and to invest the funds in laddered securities. Motion to establish the Restoration Reserve has been signed by Judge Holland. However, the funds have not yet been invested.	
94425	Marine Mammal Book	NOAA	No report required.	See Marine mammals and the <i>Exxon Valdez</i> . Loughlin, T.R., editor. 1994. Academic Press, Inc. 395 pages.	
				Book printed and for sale by Academic Press.	
94427	Experimental Harlequin Duck Breeding Survey	ADFG	Annual report being drafted. [NOTE: Annual report submitted to Chief Scientist October 13, 1995; under peer review.]	Rosenberg, D.	B11, R71, 93033, 94066, 95427, and nearshore ecosystem projects.
				PI met with other experts and examined harlequin collections at American Museum of Natural History and the Denver Museum of Natural History to develop age and sex criteria.	

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94428	Subsistence Restoration Planning and Implementation	ADFG	Annual report being drafted. [NOTE: Annual report submitted to Chief Scientist November 6, 1995.]	Fall, J. Trustee Council funded several subsistence restoration projects developed through this planning program as part of its FY 95 Work Plan. Additionally, the state Trustees met in November and approved additional projects to be supported with criminal settlement funds. Project staff followed up with communities to develop project descriptions for the next funding cycle.	
94504	Genetic Stock Identification of Kenai River Sockeye	ADFG	Project is close-out/report writing for 93012.	See 93012.	Close-out/report writing for 93012.
94505	Information Needs for Habitat Protection	USFS	Findings included in report prepared under 95505B. See 95505B for status.	See 95505B.	Close-out of 93051. 95505B.

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94506	Pigeon Guillemot Recovery	DOI	Project is close-out/report writing for 93034.	See 93034.	Report writing for 93034.
94507	Symposium Proceedings Publication	NOAA	No report required. All 61 manuscripts have been peer reviewed, revised, approved, and sent to the publisher (American Fisheries Society, AFS) for format editing. The editors are completing the preface and introduction.	Proceedings will include 61 manuscripts in the following topic areas: fate and toxicity (8 manuscripts), intertidal (10 manuscripts), treatment effects (5), subtidal (3), herring (2), salmon (12), other fish (5), birds (8), mammals (2), archaeology (1), subsistence (4), human impacts (2). The book will probably be over 1200 pages, 50% longer than first estimated.	

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

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93006	Site Specific Archaeological Restoration	DOI	Report (funded under 94007) being drafted. Results received from Auke Bay Lab late July 1995.	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 <i>Exxon Valdez</i> 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 <i>Exxon Valdez</i> 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	Report (funded under 94504) being drafted. [NOTE: Report submitted to Chief Scientist November 6, 1995.]	Genetic data were collected during 1992 and 1993 from spawning populations contributing to mixed-stock harvest of sockeye salmon in Cook Inlet. These data were used in a pilot study to estimate the component of Kenai River stocks harvested in mixed-stock areas of Upper Cook Inlet.	Began as R52. Continued as 94504. Spawning samples collected under 93015.

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93015	Kenai River Sockeye Salmon Restoration	ADFG	Annual report accepted by OSPIC; copies currently being made. [NOTE: Report accepted by OSPIC and available to public October 3, 1995.]	Tarbox, K., et al. Kenai River sockeye salmon restoration. Successful collection of baseline and fishery genetic samples. Successful in-season hydroacoustic survey of Upper Cook Inlet by subcontractor.	Began as R52 and continued as 94255. Genetic samples analyzed under 93012.
93016	Chenega Bay Chinook and Silver Salmon (NEPA Compliance)	ADFG	No report required (NEPA compliance only).		Continued as 94272. Also related to 93017.
93017	Subsistence Food Safety Survey and Testing	ADFG	Final report accepted by OSPIC; available to public.	Miraglia, R.A. 1995. Subsistence restoration project. ADF&G, Division of Subsistence, Anchorage, AK. First round of tests for hydrocarbon contamination of subsistence resources showed little or no contamination. Results of second round of testing are pending. The observations of abnormalities in the tested resources caused a shift in concerns of subsistence users from oil contamination to what effects these abnormalities have on these resources. A series of public meetings were held in communities to locate sites and species of concern.	Continued as 94279.
93024	Restoration of Coghill Lake Sockeye Salmon Stock	ADFG, USFS	Draft report peer reviewed; returned to PI for revision September 15, 1995.	Monitoring showed the need for modifying both the type and concentrations of fertilizer.	Continued as 94259 and 95259.
93032	Cold Creek Pink Salmon Restoration (NEPA Compliance)	ADFG	Project canceled.		R105

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93033	Harlequin Duck Restoration	ADFG	The results of this project will be presented in two reports (funded under 94066): (1) Report on Afognak habitat assessment and PWS production survey submitted to Chief Scientist August 9, 1995. (2) Report on blood and tissue samples (analyses being performed by UC-Davis contract lab) and hydrocarbon samples (analyses performed by NOAA-Auke Bay lab) was to be submitted to Chief Scientist by September 15, 1995 if analyses were received as scheduled from UC-Davis. Report is now overdue -- analysis not yet received from UC-Davis.	(1) Restoration monitoring of harlequin ducks in PWS and Afognak Island. Only 3 harlequin broods observed in western Prince William Sound; 14 in eastern Prince William Sound. Decreased numbers of harlequins molting in western Prince William Sound in July. Suspect incomplete gonadal development in pre-nesting western Prince William Sound harlequins. Blood/physiological analysis and hydrocarbon analyses in process. Harlequin breeding stream/nest site model in preparation. Harlequin breeding assessment completed on North Afognak Island.	Started in 1989 as B11 and continued as R71.
93034	Pigeon Guillemot Recovery	DOI	Report (funded under 94506) accepted by OSPIC; available to public.	Sanger, G.A. and M.B. Cody. 1994. Survey of pigeon guillemot colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service, Anchorage. One hundred eighty-four colonies, concentrated in southwest Prince William Sound and at Naked Island, were identified. This colony survey confirmed that the present population of pigeon guillemots in Prince William Sound is 3,000 - 4,900.	Continued as 94173.

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93035	Black Oystercatchers / Oiled Mussel Beds	DOI	Report (funded under 94020) being drafted. [NOTE: Draft report submitted to Chief Scientist for peer review October 23, 1995.]	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	Two reports are being prepared under this project. (1) DOI draft annual report peer reviewed; returned to PI for revision July 21, 1995. (2) NOAA annual report being drafted. [NOTE: Report submitted to Chief Scientist and OPSIC October 6, 1995.]	(1) Cusick, J.A. and G.B. Irvine. 1995. Geographical extent and recovery monitoring of intertidal oiled mussel beds in the Gulf of Alaska affected by the <i>Exxon Valdez</i> oil spill. (2) Babcock, M. Recovery monitoring and restoration of oiled mussel beds in PWS, Alaska. In 1992 and 1993, mussels and sediments from 70 mussel beds in PWS were sampled. Sediments collected from 31 of the oiled beds had total petroleum hydrocarbon concentrations greater than 10,000 ng/g wet weight. The highest concentrations were in sediments collected from Foul Bay (62,258 +/- 1,272 ng/g total polynuclear hydrocarbons). Minimally intrusive site manipulation was conducted at three heavily oiled mussel beds. Preliminary evaluations indicate these methods were not effective in reducing petroleum hydrocarbons adjacent to manipulated areas. Along the Kenai and Alaska Peninsulas, 15 mussel beds were sampled--four of which were new sites--and four of these beds showed total petroleum hydrocarbons in excess of 5,000 ng/g wet weight.	Continued as 94090.

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93038	Shoreline Assessment	ADEC	Draft report peer reviewed; returned to PI for revision August 10, 1994. [NOTE: Redraft of report submitted to Chief Scientist October 2, 1995.]	<p>Piper, E., et al. 1993 shoreline assessment.</p> <p>Surface oil has become stable. Subsurface oil has decreased substantially since 1991. Oiling is discontinuous throughout the study site.</p>	
93039	Herring Bay Experimental and Monitoring	ADFG	Draft report peer reviewed; returned to PI for revision September 15, 1995.	<p>Highsmith, R.C., M.S. Stekoll, P. van Tamelen, A.J. Hooten, S.M. Saupe, L. Deysher, and W.P. Erickson. 1995. Herring Bay monitoring and restoration studies. School of Fisheries and Ocean Sciences, UAF.</p> <p>Examination of dominant intertidal alga, <i>fucus gardneri</i>, has shown that larger plants were removed from intertidal in areas affected by spill/clean-up. Where <i>fucus</i> cover was reduced, abundance of ephemeral algae often increased. Populations of grazing invertebrates, e.g., limpets and periwinkles, showed reduced densities at oiled sites in upper intertidal. Initially, barnacle recruitment was lower in quadrats on tar-covered rocks than clean quadrats, but differences disappeared at most sites over time. <i>Fucus</i> germlings and filamentous algae continued to have lower densities and percent cover on oiled than non-oiled substrates. Recovery occurring in lower/middle intertidal zones and normal community interactions returning. Upper intertidal continues to exhibit damage; recovery may take additional 2-5 years.</p>	Evolved from CH1A and R102 and continued as 94086.
93041	Comprehensive Monitoring	NOAA	Project discontinued.		

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93042	Killer Whale Recovery	NOAA	Report (funded under 94092) accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	Close-out/report writing funded under 94092.

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93043	Sea Otter Demographics and Habitat	DOI (NBS)	The results of this project will be presented in three reports (funded under 94246): (1) Data on recovery of sea otter carcasses being presented in MM6 (#15). (2) Redraft of report submitted to Chief Scientist September 25, 1995. (3) Draft report on sea otter demographics peer reviewed; returned to PI for revision August 21, 1995.	(1) See MM6(#15). (2) Bodkin, J.L. and M.S. Udevitz. 1993 trial aerial survey of sea otters in PWS, Alaska. 1994. NBS, Anchorage, AK. (3) Udevitz, M.S. , B.E. Ballachey, and D. L. Bruden. 1995. A population model for sea otters in western PWS. USNBS. Anchorage, AK. Aerial survey of sea otters in Prince William Sound completed summer 1993; estimated abundance is approximately 18,000. Age distribution of sea otter carcasses recovered in spring 1993 in western Prince William Sound is similar to prespill distribution. Age- and sex-specific survival rates generated from carcass data for sea otters in Prince William Sound.	Report writing funded under 94246.
93045	Marine Bird / Sea Otter Surveys	DOI	Final report accepted by OSPIC; available to public.	Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage. Overall marine bird population estimates in Prince William Sound have not changed significantly since 1989, but were 41% lower than 1972-1973 estimates. Rates of increase of goldeneyes and surfbird populations were higher in the unoiled zone of Prince William Sound than in the oiled zone, whereas oystercatchers increased more rapidly in the oiled zone.	Started as part of B2 and continued as 94159.

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93046	Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS	ADFG	Report (funded under 94064) accepted by OSPIC; copies currently being made. [NOTE: Report accepted by OSPIC and available to public October 3, 1995.]	Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG Counts of seals at 25 trend sites in Prince William Sound were similar during pupping and molting in 1992 and 1993. However, 1993 pupping counts were 23% lower than in 1989. Molting counts were similar to 1989 postspill counts, but 27% lower than 1988 counts. Sixteen seals satellite-tagged since 1992 indicate that seals in central Prince William Sound haul out and feed near the same sites with little movement to other areas. Feeding usually occurs in depths of 100-200 meters, with a maximum recorded dive depth of 404 meters.	Started in 1989 as MM5, which was closed out as R73. Continued as 94064.

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93047	Subtidal Monitoring	ADEC, ADFG, NOAA	<p>The results of this project will be presented in three reports (funded under 94285):</p> <p>(1) NOAA sediments - Draft report submitted to Chief Scientist August 1, 1995; under peer review. [NOTE: Report peer reviewed and returned to PI for revision October 20, 1995.]</p> <p>(2) ADEC microbiology - Report accepted by OSPIC; available to public.</p> <p>(3) ADFG eelgrass - Report (which includes data and findings from ST2A) submitted to OSPIC July 28, 1995; undergoing formatting review. [NOTE: Report accepted by OSPIC and available to public October 6, 1995.]</p>	<p>(1) Recovery of sediments in the subtidal sediment environment.</p> <p>(2) Braddock, J. Microbiology of subtidal sediments: monitoring and microbial populations.</p> <p>(3) Jewett, S., et al. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in PWS 1989-93.</p> <p>As a follow-up to previous studies from 1989-1991, the numbers and activity of oil-degrading microorganisms were measured in sediments collected in 1993. Preliminary results suggest some contamination remains in subtidal sediments. However, generally very low numbers were found where visible oil was present (e.g., subsurface sediments, Northwest Bay). Analysis of 1993 eelgrass data complete. Several infaunal and epifaunal taxa more abundant in oiled bed sites than control sites. Amphipods less abundant in oiled sites. Sea urchins are more abundant. <i>Hemosiderosis</i> in fishes from oiled sites.</p>	Started as ST1A and continued as 94285. Report writing under 94285.
93049	Monitor Murre Colony Recovery	DOI/ FWS	Report accepted by Chief Scientist August 8, 1995. Not yet at OSPIC.	<p>Roseneau, D. 1995. Common murre Restoration monitoring in the Barren Islands, Alaska, 1993. U.S. Fish and Wildlife Service, AK Maritime NWR, Homer, AK.</p> <p>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.</p>	Started as R11 and continued as 94039. (Formerly in EVOS database as 93022.)

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93051	Habitat Information for Anadromous Streams and Marbled Murrelets	ADFG, DOI, USFS	<p>The results of this project will be presented in 5 reports (funded under 94505):</p> <p>(1) ADFG Stream Habitat Assessment/PWS & Lower Kenai- Final report accepted by OSPIC; available to public.</p> <p>(2) USFS Habitat Protection Info. for Channel Type Classification Study- findings included in report prepared under 95505B. See 95505B for results.</p> <p>(3) DOI Pilot Study on Capture and RadioTagging of Murrelets in PWS-report accepted by OSPIC; available to public.</p> <p>(4) DOI Information Needs for Habitat Protection: Marbled Murrelet Habitat Identification - final report submitted to OSPIC; undergoing formatting review.</p> <p>(5) USFS Upland Nesting Habitat of Marbled Murrelet - final report accepted by OSPIC; available to public.</p>	<p>(1) Sundet, K., et al. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula. ADFG</p> <p>(2) See 95505B.</p> <p>(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.</p> <p>(4) Kuletz, K.J., et al. Information needs for habitat protection: marbled murrelet habitat identification. 1994.</p> <p>(5) Characterization of the upland nesting habitat of the marbled murrelet in the <i>Exxon Valdez</i> oil spill area.</p> <p>Late season surveys, sites at the heads of bays, low elevations, high percentages of forest cover, and large trees were all consistent predictors of high murrelet activity. Radar performed better than humans in detecting murrelets and was cheaper than boat-based or ground-based surveys by humans. About 995 km of shoreline and 117 km² of uplands were surveyed for anadromous fish streams on private lands on the lower Kenai Peninsula and in Prince William Sound, resulting in discovery of 186 anadromous streams totaling about 57 km. Stream habitat parameters were collected along all streams, upper extents of anadromous distribution were documented and streams were mapped by GIS.</p>	<p>Evolved from R15 and R47. Also related to 93045. Project closeout in FY 94 as 94505 and in FY95 as 95505B.</p>

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

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93063	Anadromous Stream Surveys	USFS	Project is data analysis and report writing for anadromous stream portion of R105.	See R105.	Started as R105 and continued as 94139.
93064	Imminent Threat Habitat Protection	ADNR	No report required.	See "Opportunities for Habitat Protection/Acquisition" (2/16/93) and "Comprehensive Habitat Protection Process; Large Parcel Evaluation & Ranking, Volume I" (11/30/93). Imminent Threat Evaluation and the first round of Large Parcel Evaluation were completed. \$7.5 million from settlement funds was combined with \$14.5 million from other sources for the purchase of private inholdings in Kachemak Bay. \$29,950,000 was committed from the most recent court request for the initial payment for purchase of private land near Seal Bay on Afognak Island. The total purchase price of this transaction is \$38,700,000 with the balance to be paid in three annual installments.	
93065	Prince William Sound Recreation	USFS ADNR	Report (funded under 94217) submitted to OSPIC; undergoing formatting review.	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project. Recreation Injury Statement (10/93) was incorporated into the Draft Restoration Plan. Final report includes a prioritized list of projects and other recommendations for restoration of recreation in Prince William Sound.	Close-out/report writing funded under 94217.
93066	Alutiiq Archeological Repository	ADEC	No report required.	Opening ceremony held May 13, 1995.	

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93067	Pink Salmon Coded Wire Tag Recovery	ADFG	Report (funded under 94184) peer reviewed; returned to PI for revision April 12, 1995.	Sharr, S., and Peckham, C.J. Coded wire tag recoveries from pink salmon in PWS fisheries. 1993. Reduced commercial exploitation of damaged wild pink salmon populations through timely inseason estimates of hatchery and wild contributions to harvest. Accurate and timely stock composition estimates were used by fisheries managers to justify restriction of fishing fleet to areas where interception of damaged wild populations in mixed-stock fisheries could be minimized.	Started as FS3 and continued as R60A, 94184 (report preparation) and 94320B.
93068	Non-Pink Salmon Coded Wire Tag Recovery	ADFG	1993 results will be included in report being prepared under 94137. See 94137 for status.	See 94137. Timely and accurate inseason estimates of hatchery and wild stock contributions to commercial harvest for improved management of wild stocks in mixed-stock fisheries.	Evolved from FS3; continued as 94137.
93AD	Administrative Director's Office		No report required.		
93FC	Financial Committee		No report required.		
93RT	Restoration Team Support		No report required.		

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AD	Administrative Director's Office	ALL	No report required.		
ARC1	Archaeological Survey	ADNR	Report submitted to OSPIC; needs to be formatted.	<p>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.</p> <p>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.</p>	
AW1	Surface Oil Maps	ADEC	Report being drafted.	Lane, W.	
B02	Boat Surveys	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as 93045 and 94159.

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B03	Murres Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	Related to R11, 93022 and 94039.
B04	Eagles Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
B06	Marbled Murrelets Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Kuletz, K.J. 1994. Marbled murrelet abundance and breeding activity at Naked Island, Prince William Sound, and Kachemak Bay, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Related to R15, 93051B and 94102.

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B07	Storm Petrels Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
B08	Kittiwakes Damage Assessment Closeout	DOI	<p>Draft report peer reviewed; returned to PI for revision January 4, 1994.</p> <p>Hydrocarbon report will be submitted to Chief Scientist October 15, 1995; 30 days after its acceptance, kittiwake report will be submitted to Chief Scientist.</p>	<p>Irons, D.B. 1994. Effects of the <i>Exxon Valdez</i> oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	TS1
B09	Pigeon Guillemots Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	93034 and 94173

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B11	Harlequin Ducks Damage Assessment Closeout	ADFG	Redraft of report peer reviewed; returned to PI for revision November 22, 1994.	<p>Petroleum exposure confirmed in four species of sea ducks. Hydrocarbons in food, liver and bile. Diverse intertidal prey used by ducks. Blue mussels are a key contaminated prey. 1990-1992 low harlequin breeding densities and negligible harlequin stream activity and production in western PWS. A compendium of information on oiled harlequin coast and stream habitats is produced in a supplement to the report as a resource for future studies.</p>	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	<p>The results of this project will be presented in two reports:</p> <p>(1) Report on migrant shorebirds accepted by Chief Scientist. Not yet available at OSPIC.</p> <p>(2) Report on black oystercatchers accepted by Chief Scientist. Not yet available at OSPIC. [NOTE: Report submitted to OSPIC for formatting review October 1995.]</p>	<p>(1) Martin, P.D. 1993. Effects of the <i>Exxon Valdez</i> oil spill on migrant shorebirds using rocky intertidal habitats of Prince William Sound, Alaska, during Spring 1989. U.S. Fish and Wildlife Service, Anchorage.</p> <p>(2) Andres, B.A. 1994. The effects of the <i>Exxon Valdez</i> oil spill on black oystercatchers breeding in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.</p> <p>(1) Spring migrant shorebirds (surfbirds and black turnstones) escaped impacts because shorelines used by these species (particularly around Montague Island) were largely unoiled.</p> <p>(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.</p>	Related to R17, R103 and 93035.

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CH1A	Coastal Habitat Damage Assessment	USFS	Report accepted by OSPIC; copies currently being made.	Highsmith, R.C., et al. Comprehensive assessment of coastal habitat. School of Fisheries and Ocean Sciences, UAF. Serious and long-term lasting effects on intertidal algae. Recovery occurring but slow to none in upper intertidal habitat. Full recovery expected. Intertidal invertebrates indicate negative effects from spill. Intertidal fish findings were inconclusive.	Continued as R102, 93039 and 94086.
CH1B	Hydrocarbons in Mussels	NOAA	Draft report peer reviewed; returned to PI for revision May 8, 1995.	<i>Exxon Valdez</i> oil is located in several sites. Reductions in hydrocarbons are seen at several sites in PWS over 1989.	R103
FS01	Spawning Area Injury	ADFG	Report overdue. Was to be submitted to Chief Scientist by August 15, 1995. [Note: Report will present findings from both FS01 and R60B.]	Documented oil contamination of Prince William Sound pink salmon spawning area. Improved current and historic pink salmon escapement estimates which are necessary for accurate estimates of total wild returns. For preliminary results, see 1989, 1990 and 1991 NRDA Draft Status Reports.	Project conducted in conjunction with R60B.
FS02	Pre-emergent Fry	ADFG	Report accepted by Chief Scientist September 28, 1995. Not yet at OSPIC.	Sharr, S, B. Bue, et al. Injury to salmon eggs and pre-emergent fry in PWS. ADF&G. Measured higher embryo mortalities in oil-contaminated streams than in uniled streams.	Project conducted in conjunction with R60C; continued as 93002 and 94191.

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FS03	Coded-Wire Tags Damage Assessment	ADFG	Draft report peer reviewed; returned to PI for revision April 12, 1995.	<p>Sharr, S., et al. Coded wire tag studies on PWS salmon, 1989-91.</p> <p>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 unoled areas of Prince William Sound.</p>	Project conducted in conjunction with R60A; continued as 93067, 93068, 94185, and 94320B.
FS04A	Early Marine Salmon Damage Assessment	ADFG	Report accepted by OSPIC; available to public.	<p>Willette, M., et al. Early marine salmon injury assessment in PWS. ADFG</p> <p>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 unoled hatcheries twice that of oiled hatcheries in 1990.</p>	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.
FS04B	Juvenile Pinks	NOAA	Final report accepted by OSPIC; available to public.	<p>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.</p> <p>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.</p>	FS4A, AW3, and ST3A.

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FS05	Dolly Varden Damage Assessment	ADFG	Draft report peer reviewed; returned to PI for revision April 1995. Report includes data from R090. [NOTE: Report accepted by Chief Scientist October 9, 1995.]	Two populations of Dolly Varden and cutthroat trout emigrated from lakes into the wake of the spill. Growth from 1989-1990 was 24% and 22% slower for recaptured subadult and adult Dolly Varden and 36% to 43% slower for subadult and adult populations of cutthroat trout in populations associated with the oil. This difference persisted through 1991 for cutthroat trout but not for Dolly Varden. Chronic starvation and direct exposure to petrogenic hydrocarbons were hypothesized as effects leading to reduced growth and accelerated mortality of both Dolly Varden and cutthroat trout.	Combined with R90.

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FS11	Herring Injury	ADFG	Redraft of report submitted to Chief Scientist March 14, 1995. [Note: Report will include nine articles prepared for the Canadian Journal of Fisheries and Aquatic Science and will be included in the proceedings of the EVOS symposium.]	<p>Brown, E. D., et al. Injury to Prince William Sound Following the <i>Exxon Valdez</i> Oil Spill.</p> <p>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.</p>	Similar to 94166 (Herring Spawn Deposition). Also related to 94165 and 94320.
FS13	Effects of Hydrocarbons on Bivalves	ADFG	Report overdue. Draft report peer reviewed; returned to PI for revision April 26, 1993.		Clams are important prey for ducks, sea otters, river otters, and bears. This study is related to studies of these species and to 93017.

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FS27	Sockeye Salmon Overescapement	ADFG	Final report accepted by OSPIC; available to public.	<p>Schmidt, D.C., T.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. King, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, <i>Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Final Report</i>, ADFG, Commercial Fisheries Management and Development Division, Soldotna, AK.</p> <p>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.</p>	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	Redraft of report submitted to Chief Scientist August 8, 1995.	<p>Geiger, H., et al. Run reconstruction and life-history model.</p> <p>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.</p>	Through this project, results from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage.

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FS30	Database Management	ADFG	Final report accepted by OSPIC; available to public.	<p>DiCostanzo, C. and B.P. Simonson. 1993. Database management, <i>Exxon Valdez</i> Oil Spill Final Report, ADF&G, Division of Commercial Fisheries, Juneau, AK.</p> <p>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.</p>	This database provides a repository for all NRDA and restoration projects information.
MM1	Humpback Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Dalheim, M. and O. von Ziegesar. 1993. Effects of the <i>Exxon Valdez</i> oil spill on the abundance and distribution of humpback whales (<i>megaptera novaeangliae</i>) in Prince William Sound. NMFS, Seattle, WA and North Gulf Oceanic Society, Homer, AK.</p> <p>In 1989, photographic analysis of PWS humpbacks revealed 59 whales identified in 119 encounters. In 1990, 66 whales were identified in 201 encounters. The number of humpbacks encountered per day was less in 1989 and 1990 than in 1988. Because of the difference in survey effort before and after the spill, it is difficult to determine whether there was a difference in the number of humpbacks using PWS. Regarding distribution of whales in PWS: In 1988 and 1990, more whales used the Lower Knight Island Passage than in 1989. Increased vessel and aircraft traffic and distribution of prey may have been contributing factors for the temporary redistribution of whales during 1989. Despite considerable research effort, only one PWS humpback was documented to move from PWS to southeastern Alaska during 1989.</p>	

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MM2	Killer Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>In 1989, 8 resident (143 killer whales) and 4 transient pods (34 whales) were documented in 89 encounters. In 1990, 9 resident pods (148 whales) and 4 transient pods (30 whales) were identified in 80 encounters. During 1991, 7 resident pods (105 whales) and 2 transient pods (14 whales) were identified in 54 encounters. Despite increased effort over these 3 years, the number of encounters appears to be decreasing. The missing animals were not seen near Kodiak Island or southeast Alaska. Photographic analysis of resident pods revealed 14 animals missing from AB pod over the 1989-1991 period. The mortality rates for AB pod ranged from 3.1% in 1988 to 19.4% in 1989, 20.7% in 1990, 4.3% in 1991, and zero in 1992. Killer whale annual mortality rates are usually less than 2%.</p>	

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

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

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

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R011	Murre Recovery Monitoring	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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 murrens based on observations at breeding colonies four years after the T/V <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Homer</p> <p>Numbers of murrens 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.</p>	Continued as 93022 and 94039. Also related to B3.
R015	Marbled Murrelet Restoration Study	DOI	<p>The results of this project will be presented in two reports:</p> <p>(1) Report accepted by Chief Scientist. Not yet at OSPIC.</p> <p>(2) Report accepted by Chief Scientist. Not yet at OSPIC.</p>	<p>(1) Kuletz, K.J., D.K. Marks, and N.L. Nashund. 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</p> <p>(2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the <i>Exxon Valdez</i> oil spill zone. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout).

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R047	Stream Habitat Assessment	ADFG	Report accepted by OSPIC; available to public.	<p>Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. ADF&G.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection.
R053	Kenai River Sockeye Salmon Restoration	ADFG	Report approved by OSPIC; copies currently being made. [NOTE: Available to public October 3, 1995.]	<p>Tarbox, K., et al. Kenai River sockeye salmon restoration.</p> <p>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.</p>	R59 analyzed genetic samples collected by this project.
R059	Genetic Stock Identification	ADFG	Redraft of annual report submitted to Chief Scientist April 20, 1995. [NOTE: Accepted by Chief Scientist October 13, 1995.]	<p>Seeb, Jim and Lisa. Assessment of genetic stock structure of salmonids. ADF&G. June 1993.</p> <p>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.</p>	R53 collected spawning samples.

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R060A/B	Prince William Sound Pink Salmon	ADFG	R060A: Draft report peer reviewed; returned to PI for revision April 12, 1995. R060B: Findings will be presented in report being prepared under Project FS01.	R060A: Sharr, S., et al. Coded wire tag studies on PWS salmon, 1992. R060B: See FS01. R060A: The CWT program helped reduce the commercial harvest on damaged pink salmon populations by providing fishery managers with timely inseason fishery stock composition estimates. R060B: The escapement project provided improved pink salmon escapement information which was essential for the precise fisheries management required to protect damaged wild stocks.	Continued as 93067, 94184 (report preparation) and 94320B. Also related to R60C, which monitors and investigates mechanisms for oil damage to early life stages of pink salmon populations.
R060C	Pink Salmon Egg/Fry	ADFG, NOAA	The results of this project will be presented in two reports: (1) ADFG report accepted by OSPIC; available to public. (2) NOAA annual report accepted by Chief Scientist. Not yet at OSPIC.	(1) Sharr, Samuel and C. Peckham. 1994. Coded wire tag studies on Prince William Sound salmon, 1992. ADFG (2) ?? (1) Persistence of elevated mortalities among embryos in oiled streams versus those in unoiled streams suggests genetic damage. (2) Oil exposures completed for 1992 and 1993 brood years. All 1992 brood pinks died from bacterial kidney disease by June 1994. Spawning of 1993 brood expected in September 1995, with survival of progeny to be determined in early 1996.	Continued as 93003 and 94191. Other related projects include B11, CH1B, R60AB, R103, and 93036.

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R071	Harlequin Duck Restoration and Monitoring	ADFG	Draft report peer reviewed; returned to PI for revision May 22, 1995.	<p>Rothe, T. Breeding ecology of harlequin ducks in PWS, Alaska. ADF&G.</p> <p>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).</p>	B11 corroborated harlequin status in Prince William Sound. R103 documented continued oiled prey.
R073	Harbor Seals	ADFG	Final report accepted by OSPIC; available to public.	<p>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.</p> <p>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.</p>	Started in 1989 as MM5. Continued as 93046 and 94064.

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

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R102	Herring Bay Experimental and Monitoring Study	ADFG	Report accepted by Chief Scientist May 29, 1995. Not yet at OSPIC. [NOTE: Available to public October 6, 1995.]	Highsmith, R.C., M.S/ Stekoll, A.J.Hooten, P. van Tamelen, L. Deysher, L. McDonald, D. Strickland and W.P. Erickson. 1993. Herring Bay experimental and monitoring studies. School of Fisheries and Ocean Sciences, UAF. Cover of the dominant intertidal alga, <i>Fucus gardneri</i> , was reduced at oiled/cleaned sites. <i>Fucus</i> recruitment was poor in the mid- to upper intertidal, probably due to lack of shelter from desiccation and heating by adult plants. Limpet densities continued to be lower in the upper intertidal. Recovery appeared to be occurring in the lower intertidal zone in 1990-1991 and in the upper intertidal in 1993. Results have been incorporated into an interaction web to elucidate potential oil spill effects on community dynamics.	Continued as 93039 and 94086.

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R103	Oiled Mussels	ADFG, NOAA, DOI	The results of this project will be presented in four reports: (1) NOAA report accepted by Chief Scientist. Not yet at OSPIC. (2) DOI/FWS findings being incorporated into report on 93035. (3) ADFG report accepted by Chief Scientist. Not yet at OSPIC. (4) DOI/NPS report accepted by Chief Scientist. Not yet at OSPIC.	(1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the <i>Exxon Valdez</i> oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska. (2) See 93035. (3) Faro and Bowyer. River otter component. (4) Andres, B. 1993. Potential impacts of oiled mussel beds on higher organisms: Black oystercatchers. U.S. Fish and Wildlife Service, Anchorage, AK. (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	Report accepted by Chief Scientist. Not yet at OSPIC.	Corbett, D.G. 1994. Development of the Alaska Heritage Stewardship Program for protection of cultural resources at increased risk due to the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage, AK. Increased public knowledge of archaeological sites following the spill led to increased vandalism. A stewardship program to train local residents to protect cultural resources was developed.	93006, 94007

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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): (1) ADFG redraft of report submitted to Chief Scientist August 25, 1995. (2) USFS report accepted by Chief Scientist. Not yet at OSPIC.	(1) Willette, M. Survey and evaluation of instream habitat and stock restoration techniques for wild pink and chum salmon. (2) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. A number of sites were reviewed, evaluated, and ranked for possible instream restoration efforts. A number of efforts have subsequently been implemented.	Continued as 93063.
R106	Dolly Varden Restoration	ADFG	Final report accepted by OSPIC; available to public.	McCarron, S. and A.G. Hoffman, 1993. Technical support study for the restoration of Dolly Varden and cutthroat trout populations in PWS. ADF&G, Division of Sport Fish, Anchorage, AK. The nature and extent of injury to Dolly Varden and cutthroat trout was documented in FS5. The goal of R106 was to provide information for developing a management plan to protect impacted stocks, while allowing for continued recreational fishing for sport anglers where stocks could support fisheries. Sixty-one streams were surveyed to provide this information.	FS5 and 94139.

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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	Draft report peer reviewed; returned to PI for revision February 22, 1995.	Petroleum hydrocarbon induced injury to subtidal sediment resources. Subtidal sediments have been found to be contaminated at no fewer than 15 sites within Prince William Sound by June 1990. Contamination had reached at least 20 meters at some sites. Evidence of hydrocarbon movement downslope into subtidal sediments was detected by 1991.	Continued as 93047 and 94285. Other related projects include ST1B.
ST1B	Subtidal Microbial	ADEC	Report accepted by OSPIC; copies currently being made.	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 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

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ST2A	Shallow Benthic	ADFG	No report required. (Data/findings incorporated into report on 93047.)	See 93047. At oiled sites there was a decrease in some subtidal organisms relative to unoiled sites. Partial recovery observed in 1991.	Continued as 93047 and 94285. Other related projects include B11, CH1A, R103, and TM3.
ST2B	Deep Water Benthic	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC. [NOTE: Available to public October 6, 1995.]	Feder, H. Injury to deep benthos. ADFG. June 1995. No indication of oil-related damage to deep benthic environment. No oil fractions appear related to unusual benthic faunal composition. Differences between stations within and outside of oil trajectory were mainly related to sediment differences. No oil effects demonstrated.	CH1A, ST1B, ST2A, ST4, ST5, ST6, ST7, ST8, and TS1.
ST3A	Caged Mussels Damage Assessment	NOAA	The results of this project will be presented in two reports: (1) Redraft of report submitted to Chief Scientist July 18, 1995. (2) Report submitted to OSPIC; undergoing formatting review.	(1) Petroleum hydrocarbons in near surface seawater of PWS: chemical sampling and analysis. (2) Petroleum hydrocarbons in near surface seawater of PWS: analysis of caged mussels. Mussels transplanted along spill trajectory accumulated particulated oil at concentrations that decreased with depth, elapsed time, and distance from heavily oiled beaches. In 1990 and 1991, low concentrations of polynuclear aromatic hydrocarbons were sporadically detected at locations adjacent to heavily oiled beaches. Petroleum hydrocarbons were detected only sporadically in mussels deployed in locations outside Prince William Sound in 1989.	ST3B

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ST3B	Sediment Traps Damage Assessment	ADEC	Report accepted by OSPIC; copies currently being made.	<p>Sale, David M., J. Gibeaut, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the <i>Exxon Valdez</i> oil spill. ADEC</p> <p>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.</p>	ST3A and ST4
ST4	Fate and Toxicity Damage Assessment	NOAA	Report submitted to OSPIC; undergoing final formatting review.	<p>Fate and toxicity of spilled oil from the <i>Exxon Valdez</i>. 1994.</p> <p>Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of <i>Exxon Valdez</i> oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely.</p>	AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies.
ST5	Shrimp	ADFG	Final report accepted by OSPIC; available to public.	<p>Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp. ADF&G, Commercial Fisheries Management and Development Division, Anchorage, AK.</p> <p>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.</p>	

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ST6	Rockfish Damage Assessment	ADFG	Final report accepted by OSPIC; available to public.	<p>Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91.</p> <p>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.</p>	ST2A and ST2B
ST7	Demersal Fishes Damage Assessment	NOAA	Redraft of report submitted to Chief Scientist September 9, 1995. [NOTE: Report accepted by Chief Scientist October 17, 1995; undergoing formatting review at OSPIC.]	<p>Collier, T. Assessment of oil spill impacts on fishery resources: measurement of hydrocarbons and their metabolites, and their effects, in important species. NOAA</p> <p>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.</p>	ST1A
ST8	Sediment Data Synthesis	NOAA	Report submittal deadline delayed to December 31, 1995. Report will include electronic database.	<p>Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.</p>	TS1, TS3, and 93053.

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TM3	River Otter and Mink Damage Assessment in Prince William Sound	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	The results indicate that differences in home range, habitat selection, and latrine site abandonment, as well as changes in food habits, occurred in river otters.	CH1B and R103
TS1	Hydrocarbon Analysis	NOAA	Report being prepared under ST8.	See ST8. Coordinated the chemical analysis of all samples collected by damage assessment studies to develop a single set of analytical data comparable across projects.	ST8, TS3, and B08.
TS3	GIS Mapping and Analysis: Damage Assessment	ADNR	No report required.	Provided mapping and database support for damage assessment projects.	Supported numerous damage assessment projects, including FS 4, FS13, CH1A and R47.

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95001	Condition and Health of Harbor Seals	ADFG	On file/review complete	CE on file	On file	Completed spring field trip. Next field activities in late September. Sample analysis started.	
95007A	Archaeological Site Restoration - Index Site Monitoring	ADNR	On file/review complete	CE on file	On file	This project has two parts: Monitoring seven archaeological sites: Field work proceeding on schedule. Completing two reports on FY 94 work: Draft of the site and collection protection plan was submitted to Chief Scientist in March 1995; an annual report on 1994 monitoring activities is in preparation.	Project includes report writing for 94007B.
95007B	Archaeological Site Restoration	USFS	On file/review complete	EA/FONSI on file (93006, 94007)		Excavation and sampling of Louis Bay Lamp Site begun. Crew expected to complete work by mid-August.	
95009D	Survey of Octopus and Chiton in Intertidal Habitats	USFS	On file/review complete	CE on file	On file	Funding became active in late May. Planned May beach surveys were rescheduled to June; planned June dive surveys were escheduled to July. (NOTE: Field work was conducted near Tatitlek and Chenega Bay in June; researchers were accompanied by a village resident guide with experience harvesting octopus. Divers and a boat were hired for the July dive surveys.)	
95012	Comprehensive Killer Whale Investigation	NOAA	On file/review complete (RFP part); Spies request revision 6/23 (NOAA part)	CE on file	On file	NOAA part: Revised DPD reviewed by Chief Scientist who recommends pilot efort this year. PIs evaluating this recommendation. RFP part: Contractor has been in field and collected tissue samples from resident and transient killer whales.	

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95021	Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands	DOI (NBS)	On file/review complete	CE on file	On file	Completed procurement of equipment and logistics. A total of 15 transmitters will be used -- ten in common murres and five in tufted puffins. Trustee Council portion of project funds six transmitters; balance of costs are being borne by NBS/DOI.	
95025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI	On file/review complete	CE on file	On file	Equipment purchased, data management plan completed. Transect established and GIS coverages developed for sea otter surveys. Invertebrate literature review underway. Development of GIS framework for project as a whole has begun. Work orders for vessel charter and Side Scan Sonar were put into place. Field work scheduled to begin in July.	
95025A	Nearshore Package: Project Planning and Development	DOI (NBS)	On file/review complete	CE on file	On file	Sec 96025.	
95026	Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data	ADEC	On file/review complete	CE on file	On file	RSA in place and PI has been integrating the microbial and chemical data.	Project delayed one month due to delay in processing RSA.
95027	Kodiak Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC	On file/review complete	CE on file	On file	Project went into field June 24, 1995; second cruise scheduled for July. Cruise successful and short due to good weather and lack of oil. PIs walked beaches near Larsen Bay identified by locals.	
95029	Population Survey of Bald Eagles in PWS	DOI (FWS)	On file/review complete	CE on file	On file	Field surveys completed; data not analyzed.	
95031	Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS	DOI (FWS)	On file/review complete	CE on file	On file	Project in field.	

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95038	Symposium on Seabird Restoration	DOI (FWS)	On file/review complete	Not applicable	On file	Letter sent in May to all participants concerning workshop; discussion group assignments complete; draft workshop schedule provided to Alyeska Resort; list of pertinent literature and copies of articles sent to invitees.	
95039	Common Murre Productivity Monitoring	DOI (FWS)	Report writing only; no DPD required	Not applicable	On file	Project in field.	
95041	Introduced Predator Removal from Islands - Follow-up Surveys	DOI (FWS)	On file/review complete	EA/FONSI on file (94041)	On file	Field work complete.	
95043B	Carry-forward: Cutthroat and Dolly Varden Rehabilitation in Western PWS	USFS	On file/review complete	EA/FONSI on file		Project implementation done in Otter Creek and Gunboat Creek and ongoing on Red Creek. Evaluation of Billy's Hole completed; project work recommendation pending.	
95052	Community Interaction/Use of Traditional Knowledge	ADFG	On file/review complete	CE on file	On file	Contracts were signed with three communities (Tatitlek, Chenega Bay, and Port Graham) to provide community facilitators, and facilitators were appointed. First facilitator meeting scheduled for July in Anchorage; newsletter scheduled for August.	
95058	Landowner Assistance Program	ADFG	On file/review complete	Not applicable	On file	Assisted 3 additional landowners or development contractors in identifying and planning restoration projects for FY 96.	
95060	Spruce Bark Beetle Impacts	ADEC	RSA reviewed by Executive Director in lieu of peer review	CE on file	On file	Literature search in progress.	

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95064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	ADFG	On file/review complete	CE on file	On file	Conducted field trip in May and satellite-tagged seals. Conducted haulout overflights. Next field activity late September/early October.	
95074	Herring Reproductive Impairment	NOAA	On file/review complete	CE on file	On file	Sampled four spawning groups of herring from PWS for evaluation of reproductive impairment from age classes older and younger than the spill. Three stocks were sampled in Southeast Alaska as controls. Eggs were returned to ABL; statistical evaluation in progress. Also, toxicity exposures to eggs were conducted. Chromosome observations currently being evaluated by contractor, and this parameter will be used as a potential index of long term damage.	
95076	Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon	NOAA	On file/review complete	CE on file	On file	Experimental incubation equipment has been constructed and installed in the Little Port Walter wet lab. Water supply system for simulated intertidal incubation environment has been refurbished and is operational. Sashin Creek weir has been installed and is operational for capture and counting of returning pink salmon. Fry capture techniques were successfully tested in both Sashin Creek and Lover's Cove Creek.	
95086C	Herring Bay Monitoring and Restoration Studies	ADFG	On file/review complete	CE on file	On file	May and June field activities completed. Next field trip starts July 27. Sample sorting and identification started.	
95089	Information Management System	ALL	No DPD required	Not applicable	On file		

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95090	Mussel Bed Restoration and Monitoring in PWS and Gulf of Alaska	NOAA	On file/review complete	CE on file	On file	Completed 10-day vessel cruise to monitor mussel bed restoration activities of summer 1994. Visually the oil is reduced at all sites that were manipulated last summer. Another field trip, via aircraft, will take place in August primarily to monitor non-manipulated mussel beds. May hydrocarbon samples are being analyzed.	
95093	PWSAC: Restoration of Pink Salmon Resources and Services	ADFG	Planning funds only; no DPD required	Not applicable	On file	Continued project planning.	
95100	Administration, Science Management and Public Information	All	No DPD required	Not applicable	On file		
95102-CLO	Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound	DOI (FWS)	Report writing only; no DPD required.	Not applicable	On file	Draft report peer reviewed; under revision by PI. [NOTE: Redraft of report submitted to Chief Scientist August 16, 1995.]	
95106	Subtidal Monitoring: Eelgrass Communities	ADFG	On file/review complete	CE on file	On file	PI in the field until early August.	
95110-CLO	Closeout: Habitat Protection and Acquisition	ADNR	No DPD required	Not applicable	On file	Small Parcel Evaluation and Ranking Supplement completed July 15, 1995.	
95115	Sound Waste Management Plan	ADEC	RFP reviewed by Executive Director in lieu of peer review	CE on file	On file	June deliverable (inventory and forecast of pollution problems for the PWS communities) arrived on schedule.	
95117-BAA	Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation	NOAA	On file/review complete	CE on file	On file	Contract awarded. Field operation to collect samples is underway.	

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95121	Fatty Acid Signatures of Selected Forage Fish Species in PWS	NOAA	Contractual; Spies will review statement of work in lieu of DPD	CE on file		Contract awarded. Sample analysis will take place when samples arrive at contractor's lab.	
95126	Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	Work continues in support of both large and small parcel negotiations including appraisals, title work, hazardous materials assessments, mapping of parcels as parcel configurations are refined and additional work as needed by negotiators.	
95126A	Carry-forward: Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	See 95126.	
95127	Tatitlek Coho Salmon Release Program	ADFG	No DPD required (NEPA only)	Not applicable	On file	Draft EA under NOAA review.	
95131	Clam Restoration (Nanwalek, Port Graham, Tatitlek)	ADFG	On file/review complete	CE on file	On file	Cooperative agreement between ADFG and CRRC completed. Sampling design completed and approved by ADFG. Beach sampling to proceed late August. Draft EA in preparation.	
95137-CLO	Closeout: Prince William Sound Salmon Stock Identification and Monitoring Studies	ADFG	Report writing only; no DPD required	Not applicable	On file	Report being drafted; expect to submit to Chief Scientist September 30, 1995.	
95138	Elders/Youth Conference	ADFG	On file/review complete	CE on file	On file	Contract to organize conference awarded. Planning committee has been formed and planning has begun. Communities contacted and asked for nominations for representation at the conference. Contract awarded for conference site (hotel).	

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95139	Wild Stock Supplementation Workshop	ADFG	No DPD required	Not applicable	On file	Workshop conducted January 12-13, 1995.	
95139A1	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Little Waterfall Creek Barrier Bypass	ADFG	On file/review complete	CE on file (94139A1)	On file	Contract work to begin September 1, 1995.	
95139A2	Port Dick Spawning Channel	ADFG	On file/review complete	EA in preparation	On file	Monitoring environmental parameters, developing contract specifications for site development, preparing draft EA.	
95139B	Closeout: Otter Creek/Shrode Creek Instream Restoration	USFS	No DPD required	Not applicable (report writing only)	On file	Report submitted to Chief Scientist May 1995; under peer review.	
95139C1	Montague Riparian Rehabilitation	USFS	On file/review complete	CE on file		Evaluated project for stability, design function and effectiveness in providing improved stream habitat. Vegetation thinning evaluated and permanent plots established.	
95139C2	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Lowe River	ADFG	No DPD will be prepared (project delayed until FY 96)	Not applicable (project delayed)	Not applicable	No further work in Lowe River drainage at this time. Transferred funds to other 95139 projects (Little Waterfall Creek and Port Dick).	
95163A	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (interim funding)	NOAA	No DPD required (is close-out of FY 94 work)	Not applicable	On file	PI revising report per peer review comments.	
95163A1	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (APEX)	NOAA	On file/review complete	CE on file	On file	NOTE: Contractor began survey July 20, 1995.	
95163B	Foraging of Seabirds (APEX)	DOI	On file/review complete	CE on file	On file	Summer field work complete; October field work still to be conducted.	

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95163C	Fish Stomach Contents Analysis (APEX)	NOAA	On file/review complete	CE on file	On file	Currently analyzing summer 1994 sand lance and capelin. Spring and fall samples have been analyzed. Field collections for FY95 currently underway.	
95163D	Tufted Puffin Foraging and Reproductive Success (APEX)	DOI	On file/review complete	CE on file	On file	Field camp established on Seal Island, PWS. Puffin diet studies and reproductive studies underway.	
95163E	Reproduction and Foraging of Black-legged Kittiwakes (APEX)	DOI (FWS)	On file/review complete	CE on file	On file	Project in field.	
95163F	Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding)	DOI (FWS)	Report writing only; no DPD required.	Not applicable	On file	Final report accepted by Spies; not yet at OSPIC.	
95163F1	Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX)	DOI	On file/review complete	CE on file	On file	Project in field.	
95163G	Seabird Energetics (APEX)	NOAA	On file/review complete	CE on file	On file	Contractor had difficulties obtaining necessary equipment for field project. Have finally entered field and have begun energetics work with pigeon guillemots, puffins, and kittiwakes.	
95163I	Seabird/Forage Fish Interaction: Program Management and Integration	DOI (FWS)	On file/review complete	CE on file	On file	Statistical consultant hired (Lyman McDonald).	
95163J	Barren Islands Seabird Studies (APEX)	DOI	On file/review complete	CE on file	On file	Project in field.	
95163K	Using Predatory Fish to Sample Forage Fish (APEX)	DOI	On file/review complete	CE on file	On file	Field collection in progress.	
95163L	Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/Distribution of Forage Fish in Barren Islands (APEX)	DOI	On file/review complete	CE on file	On file	Hiring of assistants underway.	Funding only recently received by ADFG and NMFS; has delayed progress on this project to date.

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95165	PWS Herring Genetic Stock Identification	ADFG	On file/review complete	CE on file	On file	700 samples collected for analysis. RFQ prepared for contract work. Bids for contract genetics work closes August 15, 1995.	
95166	Herring Natal Habitats	ADFG	On file/review complete	CE on file	On file	Field sampling completed May 18, 1995. Expect all sample processing will be complete by August 1, 1995. Preliminary biomass estimate expected by September 1, 1995.	
95191A	Investigating and Monitoring Oil Related Egg and Alevin Mortalities	ADFG	On file/review complete	CE on file	On file	Implementing contract to actively screen for mutations on micro satellite loci. Conducting controlled oiling of pink salmon to test for somatic mutations. Working on sampling design to sample '93 brood return to Little Port Walter.	
95191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA	On file/review complete	CE on file	On file	Coded-wire tagged fish, released in May 1994, will mature and return to Little Port Walter in September. After their return, survival and reproductive abilities will be evaluated.	
95199-CLO	Institute of Marine Science - Seward Improvements EIS	ADFG	No DPD required	FEIS on file (94199)	On file	Draft operating plan was completed and is currently under review. Draft agreement with University of Alaska for scientific leadership currently under review.	
95244	Seal and Sea Otter Cooperative Subsistence Harvest Assistance	ADFG	On file/review complete	CE on file	On file	Received final report prepared under a contract by Alaska Sea Otter Commission, and are preparing for mailing to communities.	
95255	Kenai River Sockeye Restoration	ADFG	On file/review complete	CE on file	On file	In-season genetic stock identification of sockeye in progress. Will soon begin sampling returning adults.	

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95258	Sockeye Salmon Overescapement (Kenai/Kodiak)	ADFG	On file/review complete	CE on file	On file	Field studies on Kenai, Tustumena, and Kodiak lakes on schedule. Adult returns in progress. Criteria for run failure defined and submitted to Chief Scientist for review.	
95259	Restoration of Coghill Lake Sockeye	ADFG	On file/review complete	EA/FONSI on file (94259)	On file	Smolt project completed and data in process of being analyzed. Population estimate will be available soon. Limnological surveys continue on 3-week basis. Meeting held in June in Cordova to discuss stocking strategy and preparing a stocking plan. In 1995, approximately 900,000 sockeye fingerlings will be released pending FTP approval.	Due to poor flying weather, fertilizer application is behind schedule. The remaining fertilizer will be applied evenly over the next six weeks.
95266	Experimental Shoreline Oil Removal	ADEC	No DPD required (literature search only)	CE on file for Phase 1; separate NEPA for Phase 2		At request of Executive Director, workshop being scheduled, most likely for October 1995.	
95272	Chenega Chinook Release Program	ADFG	On file/review complete	EA/FONSI on file (94272)	On file	Smolt released mid-June at 20-25g. No BKD outbreak. Smolts in good condition when released from net pens.	
95279	Subsistence Restoration Project - Food Safety Testing	ADFG	On file/review complete	CE on file	On file	Contract awarded for kit preparation and training, and communities have been contacted and asked to list three local trainees. Training schedule being prepared. Contractor is contacting PWS PI for required consultation regarding kit contents and sample collection protocols.	

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95285-CLO	Closeout: Subtidal Sediment Recovery Monitoring	NOAA	No DPD required (sample analysis and report writing only)	Not applicable	On file	Hydrocarbon sample analysis underway.	
95290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance for Restoration and NRDA Environmental Samples Associated with the <i>Exxon Valdez</i> Oil Spill	NOAA	On file/review complete	CE on file	On file	All hydrocarbon data has been returned to outside agency investigators, and mussel bed samples collected in FY94 are currently being completed. At this time, there is no backlog of samples.	
95320A	Salmon Growth and Mortality	ADFG	On file/review complete	CE on file	On file	Field sampling completed June 16, 1995. Data entry approximately 30% complete.	
95320B	PWS Pink Salmon Stock Identification and Monitoring (CWT)	ADFG	On file/review complete	CE on file	On file	PI hired. Tagging complete.	Proposed for continuation as 96186.
95320C	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS	ADFG	On file/review complete	CE on file	On file	Boilers installed. Test firing week of July 24. Tetracycline marking of fry canceled because process was killing fry. \$17,000 redirected to develop otolith sampling design.	Proposed for continuation as 96188.
95320D	PWS Pink Salmon Genetics	ADFG	On file/review complete	CE on file	On file	Proofing data, provided by contractor, from last year's field studies. DNA studies in progress.	Proposed for continuation as 96196.
95320E	Juvenile Salmon and Herring Integration	ADFG	On file/review complete	CE on file	On file	Field sampling completed June 16, 1995. Data entry approximately 30% complete.	
95320G	Phytoplankton and Nutrients	ADFG	On file/review complete	CE on file	On file	Completed cruises in March, April, May and June. Collected data from AFK hatchery from March through June.	

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95320H	Role of Zooplankton in the PWS Ecosystem	ADFG	On file/review complete	CE on file	On file	Eight-day cruises for oceanography in early May and late June. 23-day cruise for zooplankton late April to mid-May. Sample processing completed for March, April and May collections.	
95320I	Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds)	ADFG	On file/review complete	CE on file	On file	Spring cruise completed and samples returned to Fairbanks. Samples from bird studies and lower trophic levels received. Laboratory analyses currently ongoing.	Sample load is rapidly approaching maximum and may experience some delays if any serious machine problems are encountered.
95320I(2)	Isotope Tracers - Food Webs of Fish	ADFG	On file/review complete	CE on file	On file	Interim funding used to complete analysis of FY94 samples and end of calendar year 1994 samples (fall cruises and fall survey). Samples presently at UAF undergoing mass spectrometry. Continuing funding: Collection of 1995 samples, laboratory preparation and mass spectrometry in progress.	
95320J	Information Systems and Model Development	ADFG	On file/review complete	CE on file	On file	Realtime data: Automated Weatherlink weather station was installed at Applegate Rocks in May. Database: Work continues on 3 main levels of SEA database -- catalog services, application services, and survey planning. Modeling: First generation coarse-grid circulation model for PWS is completed and running. General: Data ingestion, network administration and system maintenance continue.	

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95320K	PWSAC: Experimental Fry Release	ADFG	On file/review complete	EA/FONSI on file	On file	Fry released mid-June at 1.3 grams. Target size was 1.5 grams but cool water temperature prohibited growth. Fry looked good.	
95320M	Observational Physical Oceanography in PWS and the Gulf of Alaska	ADFG	On file/review complete	CE on file	On file	Four research cruises completed. Collected CTD, ADCP, and dissolved oxygen data at 30-40 stations on each cruise. Also completed two cruises using the ADCP to evaluate ocean currents in PWS tanker traffic lane. Participated in herring projects (installed gauges on Montague I.), SEA fish studies, and SEA data management project. Data analysis has begun. Will present some results at upcoming scientific meeting in Hawaii.	
95320N	Nearshore Fish	ADFG	On file/review complete	CE on file	On file	Prepared for upcoming field operations. Part of May was spent exporting last year's data to the SEA database and preparing images for the final report. Presented last year's data at an ICES meeting in Aberdeen, Scotland.	
95320Q	Avian Predation on Herring Spawn	USFS	On file/review complete	CE on file	On file	Report developed on results of 1994 work.	

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95320S	Disease Impacts on PWS Herring Populations (competitive solicitation under State of Alaska two-step, RFQ-RFP process)	ADFG	On file/review complete	CE on file	On file	In March, 250 Pacific herring were sampled from Sitka Sound during spawning and subjected to complete necropsy. Because spawning occurs later in PWS, a true prespawning sample was obtained after March 31, 1995. Lack of a true prespawning sample from Sitka Sound will affect some comparisons between the two sites, but prevalence of important parasites such as <i>Ichthyophonus</i> probably will not be affected.	
95320T	Juvenile Herring Growth and Habitat Partitioning	ADFG	On file/review complete	CE on file	On file	Two cruises were conducted with 62 samples from 13 sites. All samples have been sent to Fisheries Oceanography Lab in Fairbanks for analysis. An organizational meeting was held end of June in Cordova.	
95320U	Somatic and Spawning Energetics of Herring/Pollock	ADFG	On file/review complete	CE on file	On file	Sampling initiated late winter 1995. Proposed lab methodology has been successful.	Because funding not received until April 7, 1995, will request 6-month extension of termination date.
95320Y	Variation in Local Predation Rates on Hatchery-Released Fry	ADFG	On file/review complete	CE on file	On file	Field work and volunteer program conducted at five hatcheries in PWS in April, May and June. Data entry and data processing underway.	
95417	Carry-forward: Waste Oil Disposal Facilities	ADEC	No DPD will be prepared (project canceled)	EA/FONSI on file (94417)	Review of RFP on file	Project canceled; all funds lapsed.	
95422-CLO	Closeout: Restoration Plan EIS/Record of Decision	USFS	No DPD required	FEIS on file (94422)	On file	Project completed.	

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95424	Restoration Reserve	All	No DPD required	Not applicable	Not applicable		
95427	Harlequin Duck Recovery Monitoring	ADFG	On file/review complete	CE on file	On file	Field activities underway; PI currently in field.	
95428-CLO	Closeout: Subsistence Planning Project	ADFG	No DPD required	Not applicable	On file	Continuing to work with communities on project development.	
95505B	Data Analysis for Stream Habitat	USFS	No DPD required; report writing only.	Not applicable (report writing only)	On file	Final draft of report being prepared from comment on April 1995 draft. Expect to submit redraft to Chief Scientist September 15, 1995.	

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94007	Site Specific Archaeological Restoration	ADNR	<p><u>94007A</u> - this represents completion of the 1993 field work. The draft report has been turned in to NPS, the lead agency -- NPS is waiting for results from Auke Bay Lab on sediment samples.</p> <p><u>94007B</u> - this represents the FY94 project. Annual report being prepared by ADNR under 95007A (draft report peer reviewed; returned to PI for revision August 3, 1995).</p>	<p>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.</p> <p>Data Recovery: USFS began restoration of two sites in PWS: SEW-440 and SEW-448.</p> <p>Site Protection Plans: ADNR compiled information about the need for site protection, with emphasis on adequate curation of collections in the spill area.</p>	94007A is continuation of 93006.
94020	Black Oystercatcher Interaction with Intertidal	DOI	<p>Project is report writing for 93035 (report being drafted; expect to submit to Chief Scientist by September 30, 1995.</p> <p>Expected date delayed from July 1, 1995).</p>		Continuation of 93035.

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94039	Common Murre Population Monitoring	DOI/ FWS	Report being drafted; expect to submit to Chief Scientist by September 15, 1995. Expected date delayed from March 15, 1995.	<p>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</p> <p>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.</p>	Begun as R11; continued as 93022.
94041	Introduced Predator Removal from Islands	DOI/ FWS	Annual report peer reviewed; returned to PI for revision May 2, 1995.	<p>Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK.</p> <p>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.</p>	
94043A1	Eshamy River Restoration (W. PWS)	USFS	Project discontinued.		

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94043A2	Gumboot Creek Restoration (W. PWS)	USFS	EA completed and decision notice signed July 27, 1995.	Implementation of project has occurred. Expected field completion September 1, 1995.	
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	EA completed and decision notice signed June 28, 1995.	Project work has been completed.	
94043A6	Miners Creek/Lake Restoration (N. PWS)	USFS	Project discontinued.		
94043A7	Shrode Creek/Lake Restoration (W. PWS)	USFS	EA completed and decision notice signed June 28, 1995.		
94043B1	Sockeye Creek/Lake Restoration (Knight I.)	USFS	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	Annual report being drafted; expect to submit to Chief Scientist by September 15, 1995.		

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94064	Harbor Seal Habitat Use and Monitoring	ADFG	Includes funding for report writing on Project 93046 (report accepted by Chief Scientist; not yet at OSPIC).	<p>Frost, K. and L. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG</p> <p>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.</p>	Started as MM5; continued as R73 and 93046. Also related: 94244, 94320F.
94066	Harlequin Duck Recovery Monitoring	ADFG	<p>The results of this project will be presented in two reports (report writing funded under project 94066):</p> <p>(1) Report on Afognak habitat assessment and PWS production survey will be submitted to Chief Scientist August 1995.</p> <p>(2) Report on blood and tissue samples (analyses being performed by UC-Davis lab) and hydrocarbon samples (analyses performed by NOAA-Auke Bay lab) will be submitted to Chief Scientist by September 15, 1995 if analyses are received as scheduled from UC-Davis.</p>		93033

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94086	Herring Bay Experimental and Monitoring Studies	ADFG	Laboratory and data analysis in progress. Expect to submit annual report to Chief Scientist August 1, 1995. Expected date delayed from June 1, 1995.	Four field trips were conducted in 1994 for data and sample collections. Field activities in 1994 included data collections for population dynamics, barnacle recruitment, and water circulation studies. Laboratory analyses are continuing for mussel size-frequency distribution and mussels in filamentous algae samples collected in 1994.	Population dynamics portion of 93039.
94090	Mussel Bed Restoration and Monitoring	NOAA	Mussel chemistry nearly complete. Annual report, incorporating data from R103, 93036, and 94090 will be submitted August 1995.	Analysis of sediments collected April/May 1994 resulted in selection of 16 oiled mussel beds for restoration. Twelve mussel beds were cleaned and restored in 1994. Sediment chemistry completed; chemical analyses of mussels in process. Several sites identified as being impacted by EVOS were resampled this year.	CH1B and 93036. Other related projects include 94266 and R103.
94092	Killer Whale Recovery Monitoring	NOAA	Project is close-out and report writing of Project 93042 (report accepted by Chief Scientist; not yet 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.	Continuation of 93042.
94102	Marbled Murrelet Prey and Foraging Habitat in Prince William Sound	DOI/FWS	Report being drafted under Project 95102 (draft report peer reviewed; returned to PI for revision May 8, 1995).	Kuletz, K.J., D.K. Marks, R. Burns, and L. Prestash. Marbled murrelet foraging patterns and habitat use during the breeding season in PWS. Forty-seven murrelets were radio-tagged. Foraging ranges were obtained by tracking birds with boats and planes. Birds foraged up to 60 kms from their nests (average 10 km.). The average distance from shore was 0.6 km.	R15, 93051

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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). Work on supplement to Large Parcel Evaluation and Ranking completed November 2, 1994. Work completed on the Small Parcel Evaluation and Ranking, Phase 1. Final document released February 13, 1995 under project 95110-CLO.	94126
94126	Habitat Protection and Acquisition Fund	ADNR	No report required.	Work continues in support of large parcel negotiations, including appraisals, title work, hazardous materials assessments, mapping of parcels under negotiation, and additional work as needed by negotiators.	94110
94137	Stock Identification of Chum, Sockeye, Chinook, and Coho in PWS	ADFG	Data analysis and report writing for 93068 funded under this project (report being drafted). Expect to submit report to Chief Scientist by September 30, 1995 (delayed from March 15, 1995 due to resignation of PI).	FY94 work effort: 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. Analysis of tag recovery is expected by end of November 1994.	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

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94139A2	Port Dick Spawning Channel	ADFG	No report required (project carried forward as 95139A2).		
94139B1	Otter Creek Bypass Instream Restoration	USFS	Annual report submitted to Chief Scientist May 18, 1995; under peer review.	Otter Creek bypass rehabilitation completed.	
94139B2	Shrode Creek Bypass Instream Restoration	USFS	Report submitted to Chief Scientist May 18, 1995; undergoing peer review.	Shrode Creek bypass renovation completed.	
94139C1	Montague Island Chum Instream Restoration	USFS	Annual report submitted to Chief Scientist May 18, 1995; under peer review.	For initial monitoring results, see "Montague Island Chum Salmon Restoration", 1994 Project Report, USFS Cordova Ranger District. 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	Report accepted by Chief Scientist. Not yet 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 <i>Exxon Valdez</i> oil spill. 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.

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94163	Forage Fish Influence on Recovery of Injured Species	NOAA ADFG	The results of this project will be presented in two reports: (1) NOAA: Draft report submitted to Chief Scientist June 15, 1995; under peer review. (2) ADFG: All samples have been laboratory processed and preliminary analyses have been completed; expect to submit annual report to Chief Scientist by July 31, 1995. (NOTE: Report delayed from expected date of April 1, 1995.)	NOAA: 11/4-11/16/94 cruise successfully completed. Hydroacoustics data analysis underway at biosonics laboratory. Bird and fish stomach data analysis ongoing. ADFG: Survey for collection of stomach samples was conducted 8/27-9/9/94. Approximately 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 (Murre Prey), and 941 (Pigeon Guillemot).
94165	Herring Genetic Stock Identification in Prince William Sound	ADFG	Project deferred to FY 95 (95165); no report required.	Collection schedule disrupted by run failure. RFP to be issued as soon as possible to analyze the samples that have been collected and to finish the work in spring 1995.	95165

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94166	Herring Spawn Deposition and Reproductive Impairment	ADFG NOAA	<u>ADFG</u> - Laboratory and data analysis complete. Annual report being drafted; expect to submit by September 15, 1995. Expected date delayed from June 15, 1995. <u>NOAA</u> - Annual report being drafted; hydrocarbon analysis in progress.	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	Report accepted by Chief Scientist. Not yet at OSPIC.	D. Lindsey Hayes, Recovery monitoring of pigeon guillemot populations in PWS, Alaska. 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 sandlan 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. Also related to 94163, 94102, 94506.
94185	Coded Wire Tagging of Wild Pinks for Stock Identification	ADFG	Project includes funds for report writing of Project 93067 (draft report peer reviewed; returned to PI for revision April 12, 1995).	See 94320B.	Began as FS03; continued as R060A. Also related to 93014, 94320B.

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94191	Oil Related Egg and Alevin Mortalities	ADFG NOAA	The results of this project will be presented in two reports: (1) <u>ADFG</u> - Annual report under review by genetics staff; expect to submit to Chief Scientist by September 30, 1995. Expected date delayed from June 30, 1995. (2) <u>NOAA</u> - Annual report submitted to Chief Scientist June 13, 1995; under peer review. (Final report will be prepared after the progeny of the 1993 brood complete incubation in the spring of 1996.)	<u>ADFG</u> - Collected gametes from 8 controlled and 8 oiled streams. These eggs are now being incubated and will be completed by December 31, 1994, for analysis in 1995. <u>NOAA</u> - 1992 brood died from bacterial kidney disease. 1993 brood emerged from incubators by 5/15/94. 18,000 fish were coded wire tagged and released May 1994; 14,000 fish were retained for PIT tagging later in the summer. Dose-related differences in growth and size of 1992 brood year observed in October 1993 were not as apparent in April 1994. Embryo survival to the development of the eye and emergence from substrate were measured in 1993 brood year, and clear relationship was observed between dose and survival to both developmental stages. During emergence period, inspected over 50,000 newly emerged fry for visible lesions and observed a dose relationship with the proportion of fish displaying edema.	Began as FS02 and R060C; continued as 93003.
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.	See 95199-CLO.	95199
94217	Prince William Sound Area Recreation Implementation	USFS	Project is close-out and report writing of Project 93065 (report submitted to OSPIC; undergoing final format review).	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project.	Close-out of 93065.

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94244	Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance	ADFG	Annual report being drafted; expect to submit to Chief Scientist by August 31, 1993. Expected date delayed from June 30, 1995.	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 draft report on harbor seal and sea otter restoration was completed and distributed for internal review. A second workshop took place on March 2, 1995.	95424
94246	Sea Otter Recovery Monitoring	DOI	Funding includes funding for report writing of Project 93043: (1) Sea otter carcass data will be presented in report being prepared under MM6 (#15). (2) Draft report on aerial survey of sea otters has been peer reviewed and returned to the PI for revision December 15, 1994. (3) Report on sea otter demographics is being drafted; expect to submit to Chief Scientist April 1, 1995. [NOTE: Report not received.]		
94255	Kenai River Sockeye Salmon Restoration	ADFG	Annual report submitted to Chief Scientist May 19, 1995; under peer review.		Began as R53; continued as 93012 and 93015.

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94258	Sockeye Salmon Overescapement	ADFG	Project includes funds for report writing on Project 93002 (final report will not be prepared until multi-year project complete; annual report accepted by Chief Scientist but not yet at OSPIC).	Schmidt, D., et al. Sockeye salmon overescapement. 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.
94259	Coghill Lake Sockeye Salmon Restoration	ADFG	Annual report submitted to Chief Scientist May 19, 1995; under peer review.	Edmundson, J.A., et al. Restoration of Coghill Lake Sockeye Salmon: 1994 Annual Report on Nutrient Enrichment. Limnology and hydroacoustic sampling completed for this year. Analysis in progress. 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. Coordinate with Project 94320 (PWS System Investigation) to obtain project smolts.
94266	Shoreline Assessment and Oil Removal	ADEC	Report being drafted.		94090/Mussel Bed Restoration

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94272	Chenega Chinook Release Program	ADFG	Draft annual report submitted to Chief Scientist December 30, 1994; under peer review.	50,300 chinook smolts released at Crab Bay on 5/27/94. Chenega residents reared and fed smolts in net pens prior to release. PWSAC staff instructed Chenega Natives as to proper fish culture methods.	Continuation of 93016.
94279	Subsistence Food Safety Testing	ADFG	Annual report being drafted; expect to submit to Chief Scientist by August 31, 1995. Expected date delayed from June 30, 1995.	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. Dames and Moore (contractor) submitted report on fish and shellfish collections. 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 ADEC ADFG	Project includes funding for report writing of Project 93047 (ADEC report accepted by Chief Scientist but not yet at OSPIC; ADFG report accepted by Chief Scientist but not yet at OSPIC; NOAA report being drafted).	Braddock, J. and Z. Richter, Microbiology of subtidal sediments: monitoring microbial populations, ADEC.	Continuation of ST2A and 93047
94290	Hydrocarbon Data Analysis and Interpretation	NOAA	This project will update the hydrocarbon database being submitted as the final report for ST8. The database will be updated in FY 95 under project 95290.	In FY94, 2,742 samples were received and several hundred were submitted for analysis. Conversion of database to Oracle, the standard agency database, is complete. This will allow access to anyone with security clearance.	Continuation of ST8 and 93053.

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94320A	Salmon Growth and Mortality	ADFG	Annual report submitted to Chief Scientist as part of consolidated SEA-94 report on April 15, 1995; under peer review.	Growth rate of juvenile pink salmon in 1994 in PWS slightly above average compared to 1989-1993 period. Presently analyzing growth/survival data for PWS pink salmon with emphasis on effects of number of juvenile salmon released.	
94320B	Coded Wire Tagging Recovery-PWS Pinks	ADFG	Annual report submitted to Chief Scientist June 30, 1995; under peer review.	Sharr, S., et al. Coded wire tag recoveries from pink salmon in PWS salmon fisheries. ADF&G. 1994. 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	Draft annual report submitted to Chief Scientist March 31, 1995; under peer review.	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.

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94320D	Pink Salmon Genetics	ADFG	Report being drafted; expect to submit to Chief Scientist by September 30, 1995. Expected date is delayed from May 24, 1995.	In ADFG lab, DNA data showupstream 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	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Walleye pollock, adult pink salmon, Pacific herring, and dolly varden trout identified as important predators on juvenile salmon in Prince William Sound. FY 94 results have been analyzed to develop study design for FY 95 effort that is expected to significantly improve hypothesis testing capability.	
94320F	Harbor Seals-Trophic Interactions	ADFG	Annual report will be submitted to Chief Scientist by August 30, 1995 (in combination with 95064).	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. First prey samples currently being analyzed.	94064. Combined with 95064 for 1995.

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94320G	Phytoplankton and Nutrients	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	1994 field work concluded on 9/29/94. Analyzed all water samples (for nutrients, chlorophyll, phaeopigments, particulate C & N, dissolved oxygen, temperature and salinity) except for MV <i>Bering Explorer</i> cruise that just ended. Continued work on phytoplankton species identifications for samples from Lake Bay, Ester Island.	
94320H	Role of Zooplankton in PWS Ecosystem	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	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	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	<u>Food Web of Fishes</u> - Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations). <u>Marine Mammal Trophic Energetics</u> - Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker.	

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94320J	Information Systems and Model Development	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Repeater installation was completed and modified at two sites and further design work was completed for the HERO site at Hinchinbrook Entrance. Field testing indicated a need for design modifications to radio transmitter power levels, and flaws were discovered in some radio equipment. Reengineering by the supplier and delivery of replacements is complete for the core repeater sites on the eastern side of PWS. Approval was secured for use of the USFS repeater site on Naked Island and the repeater installed. The core PWS packet-radio repeater system is now completed and functional. This completes the last of the FY 94 tasks for this project.	
94320K	PWSAC-Experimental Fry Release	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Adult pink salmon will return in summer 1995 as a result of 1994 fry release. Marine survivals will be estimated based on coded wire tag data. Rearing and release strategies will be compared and differences in marine survival evaluated between rearing and release groups.	
94320L	PWSAC-Experimental Manipulation	ADFG	Annual report submitted to Chief Scientist December 22, 1994.	Adult fish will return in 1995. Marine survivals will be estimated for returning adults.	

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94320M	Physical Oceanography in PWS and Gulf of Alaska	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	A publication was submitted to the peer reviewed journal <i>Global Atmosphere and Ocean System</i> , titled Circulation and Hydrography in PWS, Alaska during the Spring, Summer and Fall of 1994. Analysis of CTD and ADCP from the 1994 field season is ongoing.	Most of the projects under 94320.
94320N	Nearshore Fish	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	The 1994 field season yielded over 1,000 bioacoustic data sets, which require several stages of analysis. For data management purposes, all raw data sets have been filed, and most entered into an electronic log. A majority of the post-processing software has been written, including programs to perform electroacoustic transforms, classify biological targets, and relate trawl catches to acoustic scatter. Scientists have been trained on use of the Sun workstations so that post-processing has been initiated.	
94320P	SEA Program: Program Management	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Community involvement obligations met (community visits and meetings, SEA activities bulletin).	All subprojects of 94320.
94320Q	Avian Predation on Herring Swan	USFS	Annual report being drafted.		95320Q

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94320S	Disease Impacts on Herring	ADFG	Annual report submitted to Chief Scientist July 5, 1995; under peer review.	<p><i>Ichthyoponus hoferi</i>, viral hemorrhagic septicemia virus, and other causes of morbidity in Pacific herring spawning in PWS in 1994. ADFG.</p> <p>Because of the importance of <i>ichthyophonus</i> in herring morbidity in 1994, all previous Pacific herring sampled from PWS and submitted to UC Davis (1989, 1990, 1991, 1992) were re-screened for <i>ichthyophonus</i>. Prevalence in these samples was never more than 15% and was distributed fairly evenly among liver, kidney, and spleen, but was never in the olfactory nares.</p>	
94417	Waste Oil Disposal Facilities	ADEC	Project canceled; all funds lapsed.		95417
94422	Environmental Impact Statement for the Draft Restoration Plan	USFS	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. FEIS distributed; additional copies available through OSPIC.		95422 funded to complete ROD and Administrative Record

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94423	Oil Spill Public Information Center (OSPIC)	ALL	No report required.	During the quarter ending 6/30/95, OSPIC staff received 408 visitors, responded to 742 requests for information, processed 58 interlibrary loans, loaned 96 items, distributed 5,893 documents, and acquired 7 books, 2 reports, 1 video, and 1 database. 252 documents were added to the Trustee Council Administrative Record and 47 Marine Ecosystem posters were sold. OSPIC staff received 34 NRDA/ Restoration Project final reports, approved 18, and distributed final copies of 8 reports to libraries, copy centers, and NTIS. OSPIC staff created a World Wide Web Home Page containing background information on EVOS, excerpts from the 1995 Status Report, and information on Trustee Council activities.	
94424	Restoration Reserve	DOL	No report required.	At its December 2, 1994 meeting, the Trustee Council voted to place \$24 million into a Restoration Reserve fund within the court registry investment system and to invest the funds in laddered securities. Motion to establish the Restoration Reserve has been signed by Judge Holland. However, the funds have not yet been invested.	
94425	Marine Mammal Book	NOAA	Book printed and for sale by Academic Press.	Marine mammals and the <i>Exxon Valdez</i> . Loughlin, T.R., editor. 1994. Academic Press, Inc. 395 pages.	

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94427	Experimental Harlequin Duck Breeding Survey	ADFG	Annual report being drafted; expect to submit to Chief Scientist by August 1, 1995.	PI met with other experts and examined harlequin collections at American Museum of Natural History and the Denver Museum of Natural History to develop age and sex criteria.	B11, R71, 93033, 94066, 95427, and nearshore ecosystem pro
94428	Subsistence Restoration Planning and Implementation	ADFG	Annual report being drafted; expect to submit to Chief Scientist by September 30, 1995. Expected date delayed from June 30, 1995.	Trustee Council funded several subsistence restoration projects developed through this planning program as part of its FY 95 Work Plan. Additionally, the state Trustees met in November and approved additional projects to be supported with criminal settlement funds. Project staff followed up with communities to develop project descriptions for the next funding cycle.	
94504	Genetic Stock Identification of Kenai River Sockeye	ADFG	Project is report writing for 93012 (report being drafted; expect to submit to Chief Scientist by September 30, 1995). (NOTE: Expected submission date delayed from February 30, 1995 and June 30, 1995.)		Begun as 93012. Also related to 94255.

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94505	Information Needs for Habitat Protection	USFS ADFG DOI	Project is close-out and report writing for Project 93051 (ADFG report on Stream Habitat Assessment approved by OSPIC and currently being copied; DOI report on Radio Tagging Murrelets accepted by Chief Scientist but not yet at OSPIC; USFS report on Channel Type Classification peer reviewed and returned to PI for revision; DOI report on Marbled Murrelet Habitat Identification submitted to OSPIC and undergoing formatting review; USFS report undergoing final formatting review at OSPIC).	See 93051.	Close-out of 93051. Also related to 94110, 94126.
94506	Pigeon Guillemot Recovery	DOI	Project is report writing of Project 93034 (report accepted by Chief Scientist; not yet 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.	Report writing for 93034; also related to 94173.
94507	Symposium Proceedings Publication	NOAA	The last set of seven (of 62) manuscripts is almost ready to be sent to the publisher (American Fisheries Society, AFS). The editors are completing manuscript review and beginning to write the introduction.	Proceedings will include 62 manuscripts in the following topic areas: fate and toxicity (8 manuscripts), intertidal (10 manuscripts), treatment effects (5), subtidal (3), herring (2), salmon (12), other fish (5), birds (8), mammals (2), archaeology (1), subsistence (4), human impacts (2). The book will probably be over 1200 pages, 50% longer than first estimated.	

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93002	Sockeye Salmon Overescapement	ADFG	Project continued as 94258. Final report will not be prepared until multi-year project complete. Annual report accepted by Chief Scientist February 22, 1995; not yet at OSPIC.	Schmidt, D., et al. Sockeye salmon overescapement. Red Lake 1994 plankton indicate downward trend associated with increased sockeye salmon fry recruitment. May suggest increased smolt production in 1995 likely. Akalura Lake failed to meet escapement goals. Adult return to Red Lake accurately forecasted by smolt program. Kenai River adult return forecast with large bounds because of uncertainty of smolt production in 1990.	95259 (glacial lake ecology information may be transferable), 95255. Project is a continuation of FS27, 93002, 94258.
93003	Salmon Egg to Pre-emergent Fry Survival	ADFG NOAA	The results of this project will be presented in two reports: (1) ADFG report accepted by OSPIC; available to public. (2) NOAA final report not due until after the progeny of the 1993 brood complete incubation in Spring 1996. Annual report submitted to Chief Scientist June 13, 1995.	(1) Sharr, S. and J.E. Seeb. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound. Oil exposures completed for 1992 and 1993 brood years. 1992 brood pink salmon died from bacterial kidney disease; spawning not possible. Precautions to ensure survival of 1993 brood have been taken. Persistence of elevated embryo mortalities in oiled streams in 1992 indicate possible genetic damage to wild pink salmon populations from the <i>Exxon Valdez</i> oil spill. Preliminary laboratory studies support the genetic hypothesis. Additional laboratory studies demonstrate dose response of pink salmon embryos when incubated in gravel exposed to crude oil from the <i>Exxon Valdez</i> .	Started in 1989 as FS2 and continued as R60C and 94191. Also related to R60AB. Project 93067 provides fisheries managers with information critical for protecting these chronically damaged wild pink salmon populations from overexploitation in commercial fisheries.

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93006	Site Specific Archaeological Restoration	ADNR	Report being prepared under project 94007A (report being drafted).	<p>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 <i>Exxon Valdez</i> 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 <i>Exxon Valdez</i> 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.</p>	The remaining site assessments will be completed in 1994 under Project 94007B.
93012	Genetic Stock Identification of Kenai River Sockeye Salmon	ADFG	Data analysis and report writing funded under project 94504 (report being drafted; expect to submit to Chief Scientist by September 30, 1995.) NOTE: Submission delayed from February 28, 1995 and June 30, 1995.	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.	Continued as 94504. Related to 93002 as well as to 93012 and 93015, which continued 94255. Collection of spawning samples is being conducted under 93015.

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93015	Kenai River Sockeye Salmon Restoration	ADFG	Final report will not be prepared until multi-year project complete. Annual report accepted by Chief Scientist May 8, 1995. Not yet at OSPIC.	Tarbox, K., et al. Kenai River sockeye salmon restoration. Successful collection of baseline and fishery genetic samples. Successful in-season hydroacoustic survey of Upper Cook Inlet by subcontractor.	Genetic samples analyzed under 93012. Projects 93012 and 93015 began as R52 and continued as 94255.
93016	Chenega Bay Chinook and Silver Salmon (NEPA Compliance)	ADFG	No report required.		Continued as 94272. Also related to 93017.
93017	Subsistence Food Safety Survey and Testing	ADFG NOAA	Final report (prepared by ADFG) accepted by OSPIC; available to public.	Miraglia, R.A. 1995. Subsistence restoration project. ADF&G, Division of Subsistence, Anchorage, AK. First round of tests for hydrocarbon contamination of subsistence resources showed little or no contamination. Results of second round of testing are pending. The observations of abnormalities in the tested resources caused a shift in concerns of subsistence users from oil contamination to what effects these abnormalities have on these resources. A series of public meetings were held in communities to locate sites and species of concern.	Continued as 94279. Depends on information from all resource restoration projects as well as the shoreline oiling survey. Other related subsistence projects include 94428 and 93016.
93024	Restoration of Coghill Lake Sockeye Salmon Stock	ADFG USFS	Completion of report (being drafted by ADFG) delayed due to intensive field sampling in SEA program. [NOTE: Draft report submitted to Chief Scientist July 14, 1995; under peer review.]	Monitoring showed the need for modifying both the type and concentrations of fertilizer.	Continued as 94259 and 95259.

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93032	Cold Creek Pink Salmon Restoration (NEPA Compliance)	ADFG	Project canceled.		R105
93033	Harlequin Duck Restoration	ADFG	<p>The results of this project will be presented in two reports; report writing funded under project 94066.</p> <p>(1) Report on Afognak habitat assessment and PWS production survey will be submitted to Chief Scientist by August 1, 1995. [NOTE: Report submitted August 9, 1995.]</p> <p>(2) Report on blood and tissue samples (analyses being performed by UC-Davis contract lab) and hydrocarbon samples (analyses performed by NOAA-Auke Bay lab) will be submitted to Chief Scientist by September 15, 1995 if analyses are received as scheduled from UC-Davis.</p>	<p>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.</p>	<p>Started in 1989 as B11 and continued as R71. Also related to B2, CH1B, R103, 93036, 93045, 93053, 94159 and 94427. 93036 documents continued oil in prey species. 93045 surveys corroborate harlequin status in Prince William Sound. 93053 is the hydrocarbon database for sea duck samples.</p>

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93034	Pigeon Guillemot Recovery	DOI	Final report submitted to OSPIC; undergoing formatting review. [NOTE: Report accepted by OSPIC July 30, 1995; currently being printed.]	Sanger, G.A. and M.B. Cody. 1994. Survey of pigeon guillemot colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service, Anchorage. One hundred eighty-four colonies, concentrated in southwest Prince William Sound and at Naked Island, were identified. This colony survey confirmed that the present population of pigeon guillemots in Prince William Sound is 3,000 - 4,900.	Continued as 94173. Also related to B9 and 93045.
93035	Black Oystercatchers / Oiled Mussel Beds	DOI	Report being drafted under Project 94020 (expect to submit report to Chief Scientist July 1, 1995).	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.	Related to B12, R103, 93036, and 93045. Continued as 94020.

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93036	Oiled Mussel Beds	DOI NOAA	Two reports are being prepared under this project. (1) Report being drafted. [NOTE: Draft report peer reviewed; returned to PI for revision July 21, 1995.] (2) NOAA report will be submitted to Chief Scientist August 1, 1995.	(1) Cusick, J.A. and G.B. Irvine. 1995. Geographical extent and recovery monitoring of intertidal oiled mussel beds in the Gulf of Alaska affected by the <i>Exxon Valdez</i> oil spill. Documented 27 of 66 sampled mussel bed sediments within PWS with total petroleum hydrocarbons greater than 10,000 ng/g wet weight. 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 5000 ng/g wet weight.	Continued as 94090 and 94266 (the portion of the project that examines the chemical and physical degradation of oil along national park coastlines). Other related projects include B11, CH1B, R71 and 93033.
93038	Shoreline Assessment	ADEC	Draft report peer reviewed; returned to PI for revision August 10, 1994. (NOTE: PI completed his revisions according to reviewer's comments in December 1994; contractor is incorporating them into technical report which is due to ADEC June 1, 1995.)	Piper, E., et al. 1993 shoreline assessment. Surface oil has become stable. Subsurface oil has decreased substantially since 1991. Oiling is discontinuous throughout the study site.	93036

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93039	Herring Bay Experimental and Monitoring	ADFG	Draft report submitted to Chief Scientist March 2, 1995; under peer review.	<p>Highsmith, R.C., M.S. Stekoll, P. van Tamelen, A.J. Hooten, S.M. Saupe, L. Deysher, and W.P. Erickson. 1995. Herring Bay monitoring and restoration studies. School of Fisheries and Ocean Sciences, UAF.</p> <p>Examination of dominant intertidal alga, <i>fucus gardneri</i>, has shown that larger plants were removed from intertidal in areas affected by spill/clean-up. Where <i>fucus</i> cover was reduced, abundance of ephemeral algae often increased. Populations of grazing invertebrates, e.g., limpets and periwinkles, showed reduced densities at oiled sites in upper intertidal. Initially, barnacle recruitment was lower in quadrats on tar-covered rocks than clean quadrats, but differences disappeared at most sites over time. <i>Fucus</i> germlings and filamentous algae continued to have lower densities and percent cover on oiled than non-oiled substrates. Recovery occurring in lower/middle intertidal zones and normal community interactions returning. Upper intertidal continues to exhibit damage; recovery may take additional 2-5 years.</p>	Evolved from CH1A and R102 and continued as 94086. Also related to B11, R103, ST1A, ST1B, and ST2A.
93041	Comprehensive Monitoring	NOAA	Project discontinued.		
93042	Killer Whale Recovery	NOAA	Data analysis and report writing funded as Project 94092 (report accepted by Chief Scientist; not yet at OSPIC).	<p>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.</p> <p>AB pod number has increased by one (a calf) to a total of 26. The 14 missing pod members were not present in 1993.</p>	Continued as 94092.

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93043	Sea Otter Demographics and Habitat	DOI/ NBS	<p>The results of this project will be presented in three reports (funded under 94246):</p> <p>(1) Data on recovery of sea otter carcasses being presented in MM6 (#15).</p> <p>(2) Draft report on aerial survey of sea otters has been peer reviewed and was returned to the PI for revision December 15, 1994.</p> <p>(3) Report on sea otter demographics being drafted; expect to submit to Chief Scientist by May 31, 1995. (NOTE: Submission delayed from April 1, 1995.)</p>	<p>(2) Bodkin, J.L. and M.S. Udevitz. 1993 trial aerial survey of sea otters in PWS, Alaska. 1994. NBS, Anchorage, AK.</p> <p>(3) Udevitz, M.S. , B.E. Ballachey, and D. L. Bruden. 1995. A population model for sea otters in western PWS. USNBS. Anchorage, AK.</p> <p>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.</p>	
93045	Marine Bird / Sea Otter Surveys	DOI	<p>Final report submitted to OSPIC; undergoing formatting review. [NOTE: Report accepted by OSPIC; currently being printed.]</p>	<p>Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Started as part of B2 and continued as 93045 and 94159.

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93046	Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG Counts of seals at 25 trend sites in Prince William Sound were similar during pupping and molting in 1992 and 1993. However, 1993 pupping counts were 23% lower than in 1989. Molting counts were similar to 1989 postspill counts, but 27% lower than 1988 counts. Sixteen seals satellite-tagged since 1992 indicate that seals in central Prince William Sound haul out and feed near the same sites with little movement to other areas. Feeding usually occurs in depths of 100-200 meters, with a maximum recorded dive depth of 404 meters.	Started in 1989 as MM5, which was closed out as R73. It continued as 94064. Other related projects are 94244 and one of the studies in 94320. ADFG is also conducting similar studies in southeast Alaska and near Kodiak.

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93047	Subtidal Monitoring	ADEC ADFG NOAA	The results of this project will be presented in three reports; report writing funded under project 94285: (1) NOAA sediments - Hydrocarbon analysis of subtidal sediments complete. Data analysis and report preparation in progress; expect to submit report to Chief Scientist by July 1995. [NOTE: Report submitted August 1, 1995.] (2) DEC microbiology - Report accepted by Chief Scientist. Not yet at OSPIC. (3) ADFG eelgrass - Report accepted by Chief Scientist May 30, 1995. Not yet at OSPIC. [NOTE: Report submitted to OSPIC July 28, 1995; undergoing formatting review.]	(2) Braddock, J. Microbiology of subtidal sediments; monitoring and microbial populations. (3) Jewett, S., et al. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in PWS 1989-93. As a follow-up to previous studies from 1989-1991, the numbers and activity of oil-degrading microorganisms were measured in sediments collected in 1993. Preliminary results suggest some contamination remains in subtidal sediments. However, generally very low numbers were found where visible oil was present (e.g., subsurface sediments, Northwest Bay). Analysis of 1993 eelgrass data complete. Several infaunal and epifaunal taxa more abundant in oiled bed sites than control sites. Amphipods less abundant in oiled sites. Sea urchins are more abundant. Hemosiderosis in fishes from oiled sites.	Started as ST1A and continued as 94285. Other related projects include ST1A, ST1B and 93053. Report writing under 94285.
93049	Monitor Murre Colony Recovery	DOI/ FWS	Redraft submitted to Chief Scientist June 29, 1995. [NOTE: Report accepted by Chief Scientist August 8, 1995.]	Roseneau, D. 1995. Common murre Restoration monitoring in the Barren Islands, Alaska, 1993. U.S. Fish and Wildlife Service, AK Maritime NWR, Homer, AK. Murre productivity in the Barren Islands was 0.4 - 0.6 chicks per nest site in 1993, up from near zero in 1989. Population counts on plots were similar to or higher than in previous postspill years.	Started as R11 and continue as 94039. Also related to B (Formerly in EVOS database as 93022.)

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93051	Habitat Information for Anadromous Streams and Marbled Murrelets	ADFG DOI USFS	<p>The results of this project will be presented in 5 reports (being prepared under 94505):</p> <p>(1) ADFG Stream Habitat Assessment/PWS & Lower Kenai- Final report approved by OSPIC; copies currently being made.</p> <p>(2) USFS Habitat Protection Info. for Channel Type Classification Study- draft report peer reviewed; returned to PI for revision October 31, 1994.</p> <p>(3) DOI Pilot Study on Capture and RadioTagging of Murrelets in PWS-report accepted by Chief Scientist.</p> <p>(4) DOI Information Needs for Habitat Protection: Marbled Murrelet Habitat Identification - final report submitted to OSPIC; undergoing formatting review.</p> <p>(5) USFS Upland Nesting Habitat of Marbled Murrelet - final report approved by OSPIC; copies currently being made.</p>	<p>(1) Sundet, K. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula. ADFG</p> <p>(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.</p> <p>(4) Kuletz, K.J., et al. Information needs for habitat protection: marbled murrelet habitat identification. 1994.</p> <p>(5) Characterization of the upland nesting habitat of the marbled murrelet in the <i>Exxon Valdez</i> oil spill area.</p> <p>Late season surveys, sites at the heads of bays, low elevations, high percentages of forest cover, and large trees were all consistent predictors of high murrelet activity. Radar performed better than humans in detecting murrelets and was cheaper than boat-based or ground-based surveys by humans. About 995 km of shoreline and 117 km² of uplands were surveyed for anadromous fish streams on private lands on the lower Kenai Peninsula and in Prince William Sound, resulting in discovery of 186 anadromous streams totaling about 57 km. Stream habitat parameters were collected along all streams, upper extents of anadromous distribution were documented and streams were mapped by GIS.</p>	<p>Evolved from R15 and R47. Information will be integrated into the restoration GIS (93062) and supplement 93033. Also related to 93045. Project closeout in FY 94 as 94505.</p>

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93053	Hydrocarbon Database	NOAA	No report required.	Continuing project with updating and quality control of hydrocarbon data. Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.	Continued as 94290. This project supports most restoration projects.
93057	Damage Assessment GIS	ADNR	Project completed; no report required.	Cataloged and plotted over 160 maps for public access at OSPIC. Provided mapping and database support for damage assessment studies.	Supported numerous damage assessment projects, including B11, FS13, AW1, and CH1A.
93059	Habitat Identification Workshop	USFS	Project completed; no report required.	Identified parcels of non-public land containing critical habitat necessary for the recovery of injured resources and services.	93046, 93051, 93059, 93063, 93064, and 93065.
93060	Accelerated Data Acquisition	USFS	Project completed; no report required.	Collected and organized existing resource data needed for the analysis of private lands in the oil spill area.	93046, 93051, 93059, 93063, 93064, and 93065.
93062	Restoration GIS	ADNR	Project completed; no report required.	Provided technical mapping and database support for restoration projects. Generated spill area map and land status maps for Kachemak Bay, Seal Bay, and Eyak lands in support of habitat protection data analysis and negotiations. Plotted maps to provide public access to EVOS information.	Supported numerous restoration projects, including 93038, 93063, 93064 and R47.

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93063	Anadromous Stream Surveys	USFS ADFG	Project is data analysis and report writing for anadromous stream portion of R105. Two reports are being prepared. (1) USFS report accepted by Chief Scientist; not yet at OSPIC. (2) Draft report peer reviewed; returned to PI for revision May 2, 1995.	(1) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. (2) Willette, M. Survey and evaluation of instream habitat and stock restoration techniques for wild pink and chum salmon.	Started as R105 and continued as 93063 and 94139.
93064	Imminent Threat Habitat Protection	ADNR	No report required.	See "Opportunities for Habitat Protection/Acquisition" (2/16/93) and "Comprehensive Habitat Protection Process; Large Parcel Evaluation & Ranking, Volume I" (11/30/93). Imminent Threat Evaluation and the first round of Large Parcel Evaluation were completed. \$7.5 million from settlement funds was combined with \$14.5 million from other sources for the purchase of private inholdings in Kachemak Bay. \$29,950,000 was committed from the most recent court request for the initial payment for purchase of private land near Seal Bay on Afognak Island. The total purchase price of this transaction is \$38,700,000 with the balance to be paid in three annual installments.	Data sources: 93051, 93059, 93060, 93062, and 93063.
93065	Prince William Sound Recreation	USFS ADNR	Report writing for this project funded under Project 94217 (report submitted to OSPIC; undergoing formatting review).	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project. Recreation Injury Statement (10/93) was incorporated into the Draft Restoration Plan. Final report includes a prioritized list of projects and other recommendations for restoration of recreation in Prince William Sound.	Continued as 94217.

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93066	Alutiiq Archeological Repository	ADEC	No report required.	Opening ceremony held May 13, 1995.	
93067	Pink Salmon Coded Wire Tag Recovery	ADFG	Redraft of report submitted to Chief Scientist December 20, 1994.	Sharr, S., and Peckham, C.J. Coded wire tag recoveries from pink salmon in PWS fisheries. 1993. 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, 94185 (report preparation) and 94320B.
93068	Non-Pink Salmon Coded Wire Tag Recovery	ADFG	Data analysis and report writing funded under project 94137 (report being drafted; expect to submit to Chief Scientist by September 30, 1995). NOTE: Expected submission date delayed from June 30, 1995 and March 15, 1995).	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. Other related projects are 93024 and 94320. 93024 was designed to restore the natural population of sockeye salmon from Coghill Lake.
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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AD	Administrative Director's Office	ALL	No report required.		
ARC1	Archaeological Survey	ADNR	Report submitted to OSPIC; needs to be formatted.	<p>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.</p> <p>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.</p>	
AW1	Surface Oil Maps	ADEC	Report being drafted.		
B02	Boat Surveys	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as 93045 and 94159.

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B03	Murres Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	Related to R11, 93022 and 94039.
B04	Eagles Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
B06	Marbled Murrelets Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Kuletz, K.J. 1994. Marbled murrelet abundance and breeding activity at Naked Island, Prince William Sound, and Kachemak Bay, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Related to R15, 93051B and 94102.

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B07	Storm Petrels Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
B08	Kittiwakes Damage Assessment Closeout	DOI	<p>Draft report peer reviewed; returned to PI for revision January 4, 1994.</p> <p>Hydrocarbon report will be submitted to Chief Scientist October 15, 1995; 30 days after its acceptance, kittiwake report will be submitted to Chief Scientist.</p>	<p>Irons, D.B. 1994. Effects of the <i>Exxon Valdez</i> oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	TS1
B09	Pigeon Guillemots Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	93034 and 94173

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B11	Harlequin Ducks Damage Assessment Closeout	ADFG	Redraft of report peer reviewed; returned to PI for revision November 22, 1994. Expect to resubmit to Chief Scientist by August 1, 1995. (NOTE: Expected submission date delayed from March 1, 1995.)	Petroleum exposure confirmed in four species of sea ducks. Hydrocarbons in food, liver and bile. Diverse intertidal prey used by ducks. Blue mussels are a key contaminated prey. 1990-1992 low harlequin breeding densities and negligible harlequin stream activity and production in western PWS. A compendium of information on oiled harlequin coast and stream habitats is produced in a supplement to the report as a resource for future studies.	Project conducted in conjunction with R71 and continued as 93033. Also related to B2, CH1B, TS1, R103, and 93036.

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B12	Shorebirds Damage Assessment Closeout	DOI	The results of this project will be presented in two reports: (1) Report on migrant shorebirds has been accepted by Chief Scientist but is not yet available at OSPIC. (2) Report on black oystercatchers has been accepted by Chief Scientist but is not yet available at OSPIC.	(1) Martin, P.D. 1993. Effects of the <i>Exxon Valdez</i> oil spill on migrant shorebirds using rocky intertidal habitats of Prince William Sound, Alaska, during Spring 1989. U.S. Fish and Wildlife Service, Anchorage. (2) Andres, B.A. 1994. The effects of the <i>Exxon Valdez</i> oil spill on black oystercatchers breeding in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage. (1) Spring migrant shorebirds (surfbirds and black turnstones) escaped impacts because shorelines used by these species (particularly around Montague Island) were largely unoiled. (2) Black oystercatcher breeding was disrupted and hatching success reduced. Chicks raised on oiled beaches grew more slowly than chicks raised on unoiled beaches, perhaps due to ingestion of contaminated food.	Related to R17, R103 and 93035.
CH1A	Coastal Habitat Damage Assessment	USFS	Report accepted by OSPIC; copies currently being made.	Highsmith, R.C., et al. Comprehensive assessment of coastal habitat. School of Fisheries and Ocean Sciences, UAF. Serious and long-term lasting effects on intertidal algae. Recovery occurring but slow to none in upper intertidal habitat. Full recovery expected. Intertidal invertebrates indicate negative effects from spill. Intertidal fish findings were inconclusive.	Continued as R102, 93039 and 94086. Also related to B11, FS13, R102, MM6, R71, ST3A, TM3, and TS1.

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CH1B	Hydrocarbons in Mussels	NOAA	Peer reviewed report returned to PI for revision May 8, 1995.	<i>Exxon Valdez</i> oil is located in several sites. Reductions in hydrocarbons are seen at several sites in PWS over 1989.	R103
FS01	Spawning Area Injury	ADFG	Project delayed due to over-commitment of PI, and resignation of PI. Report has been assigned to new PI; expect to submit draft report to Chief Scientist by August 15, 1995. [Note: Report will present findings from both FS01 and R60B.]	For preliminary results, see 1989, 1990 and 1991 NRDA Draft Status Reports. 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.	Project conducted in conjunction with R60B. related to 93012, 93015 and 94255. FS1, FS2, FS3, FS4A, and FS4B measured oil damages to specific life stages. FS28 incorporated their results into a model to estimate population level damages.

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FS02	Pre-emergent Fry	ADFG	Redraft of report submitted to Chief Scientist June 19, 1995.	Sharr, S, B. Bue, et al. Injury to salmon eggs and pre-emergent fry in PWS. ADF&G. Measured higher embryo mortalities in oil-contaminated streams than in unoiled streams.	Project conducted in conjunction with R60C; continued as 93002 and 94191. Also related to R60A/B, 93012, 93015 and 94255. 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.
FS03	Coded-Wire Tags Damage Assessment	ADFG	Draft report peer reviewed; returned to PI for revision April 12, 1995.	Sharr, S., et al. Coded wire tag studies on PWS salmon, 1989-91. Unable to detect significant differences in survival to adults from fry emerging from oiled and control streams. Also unable to detect significant difference in survival of hatchery fish reared in oiled versus unoiled areas of Prince William Sound.	Project conducted in conjunction with R60A; continued as 93067, 93068, 94185, and 94320B. FS1, FS2, FS3, FS4A, and FS4B measured oil damages to specific life stages. FS28 incorporated their results into a model to estimate population level damage.

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FS04A	Early Marine Salmon Damage Assessment	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Willette, M., et al. Early marine salmon injury assessment in PWS.</p> <p>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.</p>	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.
FS04B	Juvenile Pinks	NOAA	Final report approved by OSPIC; available for public review.	<p>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.</p> <p>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.</p>	FS4A, AW3, and ST3A.

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FS05	Dolly Varden Damage Assessment	ADFG	Draft report peer reviewed; returned to PI for revision.	<p>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.</p>	Combined with R90.
FS11	Herring Injury	ADFG	Redraft of report submitted to Chief Scientist March 14, 1995. [Note: Report will include nine articles prepared for the Canadian Journal of Fisheries and Aquatic Science and will be included in the proceedings of the EVOS symposium.]	<p>Brown, E. D., et al. Injury to Prince William Sound Following the <i>Exxon Valdez</i> Oil Spill.</p> <p>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.</p>	Similar to 94166 (Herring Spawn Deposition). Also related to 94165 and 94320.

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FS13	Effects of Hydrocarbons on Bivalves	ADFG	Draft report peer reviewed; returned to PI for revision April 26, 1993. Expect to submit redraft to Chief Scientist August 15, 1995.		Clams are important prey for ducks, sea otters, river otters, and bears. This study is related to studies of these species and to 93017.
FS27	Sockeye Salmon Overescapement	ADFG	Report accepted by OSPIC; copies currently being made. [NOTE: Copies sent to OSPIC July 10, 1995.]	Schmidt, D.C., T.E. Tarbox, B.M. Barrett, L.K. Brannian, S.R. Carlson, J.A. Edmundson, J.M. Edmundson, S.G. Honnold, B.E. King, G.B. Kyle, P.A. Roche, P. Shields, and C.O. Swanton. 1993. Sockeye salmon overescapement, <i>Exxon Valdez</i> Oil Spill State/Federal Natural Resource Damage Assessment Final Report, ADFG, Commercial Fisheries Management and Development Division, Soldotna, AK. 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	Draft report peer reviewed; returned to PI for revision August 31, 1993. [NOTE: Redraft submitted to Chief Scientist August 8, 1995.]	Geiger, H., et al. Run reconstruction and life-history model. Estimated losses to adult populations from oil damages to early life stages at 2 to 3 million in 1990, and 40 to 70 thousand in 1991. Projected losses of 100 to 200 thousand adults in 1993 and 1994.	Through this project, res from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage.

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FS30	Database Management	ADFG	Report accepted by OSPIC; copies currently being made. [NOTE: Copies sent to OSPIC July 10, 1995.]	<p>DiCostanzo, C. and B.P. Simonson. 1993. Database management, <i>Exxon Valdez</i> Oil Spill Final Report, ADF&G, Division of Commercial Fisheries, Juneau, AK.</p> <p>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.</p>	This database provides a repository for all NRDA and restoration projects information.
MM1	Humpback Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Dalheim, M. and O. von Ziegesar. 1993. Effects of the <i>Exxon Valdez</i> oil spill on the abundance and distribution of humpback whales (<i>megaptera novaeangliae</i>) in Prince William Sound. NMFS, Seattle, WA and North Gulf Oceanic Society, Homer, AK.</p> <p>No documented injury.</p>	
MM2	Killer Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>Whales missing from AB and AT pods. A total of 14 AB pod members lost from 1988-1990 due to unknown causes.</p>	

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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 (not yet at OSPIC); 4 reports have been peer reviewed and returned to PIs for revision.	<p>(1) Ballachey, B.E. Biomarkers of damage to sea otters in PWS following potential exposure to oil spilled from the T/V <i>Exxon Valdez</i>. [Final report submitted to OSPIC; undergoing formatting review]</p> <p>(2) Ballachey, B.E. and D.M. Mulcahy. Hydrocarbon residues in tissues of sea otters (<i>Enhydra lutris</i>) collected from southeast Alaska. [Redraft of report submitted to Chief Scientist June 30, 1995.]</p> <p>(3) Ballachey, B.E. and D. M. Mulcahy. Hydrocarbons in hair, liver and intestine of sea otters (<i>Enhydra lutris</i>) found dead along the path of the <i>Exxon Valdez</i> oil spill [Redraft of report submitted to Chief Scientist June 30, 1995.]</p> <p>(4) Bodkin, J.L., D.M. Mulcahy and C. Lensink. Age-specific reproduction in female sea otters (<i>Enhydra lutris</i>) from southcentral Alaska: analysis of reproductive tracts. [Report accepted by Chief Scientist, not yet at OSPIC]</p> <p>5) Bodkin, J.L. and M.S. Udevitz. An intersection model for estimating sea otter mortality from the <i>Exxon Valdez</i> oil spill along the Kenai Peninsula. [Final report submitted to OSPIC; undergoing formatting review.]</p>	93043

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

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

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R011	Murre Recovery Monitoring	DOI	Redraft of report submitted to Chief Scientist June 1, 1995.	<p>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 <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Homer</p> <p>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.</p>	Continued as 93022 and 94039. Also related to B3.
R015	Marbled Murrelet Restoration Study	DOI	<p>The results of this project will be presented in two reports:</p> <p>(1) Report accepted by Chief Scientist. Not yet at OSPIC.</p> <p>(2) Draft report peer reviewed; returned to PI for revision. [NOTE: Redraft submitted to Chief Scientist July 20, 1995.]</p>	<p>(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</p> <p>(2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the <i>Exxon Valdez</i> oil spill zone. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout).

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R047	Stream Habitat Assessment	ADFG	Report accepted by OSPIC; copies currently being made.	<p>Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. Habitat and Restoration Division Technical Report No. 93-3, <i>Exxon Valdez</i> Restoration and Habitat Protection Planning. 104 pp.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection.
R053	Kenai River Sockeye Salmon Restoration	ADFG	Annual status report accepted by Chief Scientist February 22, 1995. Not yet at OSPIC.	<p>Tarbox, K., et al. Kenai River sockeye salmon restoration.</p> <p>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.</p>	R59 analyzed genetic samples collected by this project.
R059	Genetic Stock Identification	ADFG	Redraft of report submitted to Chief Scientist April 20, 1995.	<p>Seeb, Jim and Lisa. Assessment of genetic stock structure of salmonids.</p> <p>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.</p>	R53 collected spawning samples.

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R060A/B	Prince William Sound Pink Salmon	ADFG	R060A: Redraft of report submitted to Chief Scientist. R060B: Findings will be presented in report being prepared under Project FS01. (Project delayed due to over-commitment of PI; primary author changed to rectify problem. Will submit draft report to Chief Scientist by August 15, 1995; expected date delayed from April 15, 1995.)	R060A: Sharr, S., et al. Coded wire tag studies on PWS salmon, 1992. R060A: The CWT program helped reduce the commercial harvest on damaged pink salmon populations by providing fishery managers with timely inseason fishery stock composition estimates. R060B: The escapement project provided improved pink salmon escapement information which was essential for the precise fisheries management required to protect damaged wild stocks.	Continued as 93067, 94185 (report preparation) and 94320B. Also related to R60C, which monitors and investigates mechanisms for oil damage to early life stages of pink salmon population.

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R060C	Pink Salmon Egg/Fry	ADFG NOAA	The results of this project will be presented in two reports: (1) ADFG report accepted by OSPIC; available to public. (2) NOAA annual report accepted by Chief Scientist.	(1) Sharr, Samuel and C. Peckham. 1994. Coded wire tag studies on Prince William Sound salmon, 1992. ADFG (1) Persistence of elevated mortalities among embryos in oiled streams versus those in unoiled streams suggests genetic damage. (2) Oil exposures completed for 1992 and 1993 brood years. All 1992 brood pinks died from bacterial kidney disease by June 1994. Spawning of 1993 brood expected in September 1995, with survival of progeny to be determined in early 1996.	Continued as 93003 and 94191. Other related projects include B11, CH1B, R60AB, R103, and 93036.
R071	Harlequin Duck Restoration and Monitoring	ADFG	Draft report peer reviewed; returned to PI for revision May 22, 1995.	Rothe, T. Breeding ecology of harlequin ducks in PWS, Alaska. ADF&G. 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.

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R073	Harbor Seals	ADFG	Final report submitted to OSPIC; available to public.	<p>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.</p> <p>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.</p>	Started in 1989 as MM5. Continued as 93046 and 94064.
R090	Dolly Varden Char Monitoring	ADFG	Report being prepared under Project FS05 (redraft of report submitted to Chief Scientist February 1, 1994).	<p>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.</p>	Project combined with FS05. R90 and R106 provide information on populations of Dolly Varden and cutthroat trout for 94320 (Ecosystem Study Plan).

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R092	GIS Mapping and Analysis: Restoration	ADNR DOI	No report required.	<p>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.</p>	Supported numerous restoration projects.
R102	Herring Bay Experimental and Monitoring Study	ADFG	Report accepted by Chief Scientist May 29, 1995. Not yet at OSPIC.	<p>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. 203 pp.</p> <p>Cover of the dominant intertidal alga, <i>Fucus gardneri</i>, was reduced at oiled/cleaned sites. <i>Fucus</i> recruitment was poor in the mid- to upper intertidal, probably due to lack of shelter from desiccation and heating by adult plants. Limpet densities continued to be lower in the upper intertidal. Recovery appeared to be occurring in the lower intertidal zone in 1990-1991 and in the upper intertidal in 1993. Results have been incorporated into an interaction web to elucidate potential oil spill effects on community dynamics.</p>	Continued as 93039 and 94086. Also related to B11, CH1A, R103, and TM3.

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R103	Oiled Mussels	ADFG NOAA DOI	<p>The results of this project will be presented in four reports:</p> <p>(1) NOAA report accepted by Chief Scientist; not yet at OSPIC.</p> <p>(2) DOI/FWS report being prepared under Project 93035/94020 (expect to submit report to Chief Scientist July 1, 1995.)</p> <p>(3) ADFG report accepted by Chief Scientist. Not yet at OSPIC.</p> <p>(4) DOI/NPS report accepted by Chief Scientist; not yet at OSPIC.</p>	<p>(1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the <i>Exxon Valdez</i> oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska.</p> <p>(3) Faro and Bowyer. River otter component.</p> <p>(4) Andres, B. 1993. Potential impacts of oiled mussel beds on higher organisms: Black oystercatchers. U.S. Fish and Wildlife Service, Anchorage, AK.</p> <p>(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.</p>	Continued as 93036, 94090, and 95090. Other related projects include B11, B12, CH1B, R7, TM3, and 93033.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
R104A	Site Stewardship	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Corbett, D.G. 1994. Development of the Alaska Heritage Stewardship Program for protection of cultural resources at increased risk due to the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage, AK. Increased public knowledge of archaeological sites following the spill led to increased vandalism. A stewardship program to train local residents to protect cultural resources was developed.	93006, 94007
R105	Instream Survey Restoration Implementation Planning	ADFG USFS	The results of this project will be presented in two reports: (1) ADFG redraft of report submitted to Chief Scientist January 6, 1995. (2) USFS report being prepared under Project 93063 (report accepted by Chief Scientist; not yet at OSPIC).	(2) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. A number of sites were reviewed, evaluated, and ranked for possible instream restoration efforts. A number of efforts have subsequently been implemented.	Continued as 93063. Related projects include FS1, R47, 93024, 93032, and 94139.
R106	Dolly Varden Restoration	ADFG	Final report submitted to OSPIC; available to public.	McCarron, S. and A.G. Hoffman, 1993. Technical support study for the restoration of Dolly Varden and cutthroat trout populations in PWS. ADF&G, Division of Sport Fish, Anchorage, AK. The nature and extent of injury to Dolly Varden and cutthroat trout was documented in FS5. The goal of R106 was to provide information for developing a management plan to protect impacted stocks, while allowing for continued recreational fishing for sport anglers where stocks could support fisheries. Sixty-one streams were surveyed to provide this information.	FS5 and 94139.

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<u>Project No.</u>	<u>Project Title</u>	<u>Lead Agency</u>	<u>Report Status</u>	<u>References and Results</u>	<u>Related Projects</u>
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	Draft report peer reviewed; returned to PI for revision February 22, 1995.	<p>Petroleum hydrocarbon induced injury to subtidal sediment resources.</p> <p>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.</p>	Continued as 93047 and 94285. Other related projects include ST1B.
ST1B	Subtidal Microbial	ADEC	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Braddock, Joan F., B. Rasley, T. Yeager, J. Lindstrom, D. Brown. Hydrocarbon mineralization potentials and microbial populations in marine sediments following the <i>Exxon Valdez</i> oil spill. DEC</p> <p>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.</p>	93047

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ST2A	Shallow Benthic	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	Jewett, Stephen C., T.A. Dean, L.J. Haldorson, D.A. Laur, M. Stekoll, and L. McDonald. 1993. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in Prince William Sound, Alaska 1989-91. 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	Draft report peer reviewed; returned to PI for revision February 23, 1995. [NOTE: Redraft submitted to Chief Scientist July 14, 1995.]	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, ST., ST5, ST6, ST7, ST8, and TS1.
ST3A	Caged Mussels Damage Assessment	NOAA	The results of this project will be presented in two reports: (1) Redraft of report sent to Chief Scientist July 18, 1995. (2) Redraft of report sent to Chief Scientist July 18, 1995.	Mussels transplanted along spill trajectory accumulated particulated oil at concentrations that decreased with depth, elapsed time, and distance from heavily oiled beaches. In 1990 and 1991, low concentrations of polynuclear aromatic hydrocarbons were sporadically detected at locations adjacent to heavily oiled beaches. Petroleum hydrocarbons were detected only sporadically in mussels deployed in locations outside Prince William Sound in 1989.	ST3B

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ST3B	Sediment Traps Damage Assessment	ADEC	Report accepted by OSPIC; copies currently being made.	<p>Sale, David M., J. Gibeaut, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the <i>Exxon Valdez</i> oil spill. ADEC</p> <p>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.</p>	ST3A and ST4
ST4	Fate and Toxicity Damage Assessment	NOAA	Report submitted to OSPIC; undergoing final formatting review.	<p>Fate and toxicity of spilled oil from the <i>Exxon Valdez</i>. 1994.</p> <p>Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of <i>Exxon Valdez</i> oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely.</p>	AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies.
ST5	Shrimp	ADFG	Final report accepted by OSPIC; available to public.	<p>Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp. ADF&G, Commercial Fisheries Management and Development Division, Anchorage, AK.</p> <p>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.</p>	Relates to all other fish studies. Shrimp are a principle food source for fish and some whales.

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ST6	Rockfish Damage Assessment	ADFG	Final report accepted by OSPIC; available to public.	<p>Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91.</p> <p>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.</p>	ST2A and ST2B
ST7	Demersal Fishes Damage Assessment	NOAA	Draft report peer reviewed; returned to PI for revision November 17, 1994.	<p>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.</p>	ST1A
ST8	Sediment Data Synthesis	NOAA	Report submittal deadline delayed to December 31, 1995. Report will include electronic database.	<p>Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.</p>	TS1, TS3, and 93053.

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TM3	River Otter and Mink Damage Assessment in Prince William Sound	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	The results indicate that differences in home range, habitat selection, and latrine site abandonment, as well as changes in food habits, occurred in river otters.	CH1B and R103
TS1	Hydrocarbon Analysis	NOAA DOI	No report required (report being prepared under ST8).	Coordinated the chemical analysis of all samples collected by damage assessment studies to develop a single set of analytical data comparable across projects.	ST8, TS3, and B08.
TS3	GIS Mapping and Analysis: Damage Assessment	ADNR DOI	No report required.	Provided mapping and database support for damage assessment projects.	Supported numerous damage assessment projects, including FS 4, FS13, CH1A and R47.

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95001	Condition and Health of Harbor Seals	ADFG	On file/review complete	CE on file	On file		
95007A	Archaeological Site Restoration - Index Site Monitoring	ADNR	On file/review complete	CE on file	On file		Project is report writing for 94007B.
95007B	Archaeological Site Restoration	USFS	Expect to submit to Chief Scientist by June 1, 1995.	EA/FONSI on file (93006, 94007)			
95009D	Survey of Octopus and Chiton in Intertidal Habitats	USFS	On file/review complete	CE on file	On file		
95012	Comprehensive Killer Whale Investigation	NOAA	On file/review complete	CE on file	On file		
95021	Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands	DOI (NBS)	On file/review complete	CE on file	On file		
95025	Nearshore Package: Project Planning and Development	DOI (NBS)	On file/review complete	CE on file	On file		
95025	Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI	On file/review complete	CE on file	On file		
95026	Hydrocarbon Monitoring: Integration of Microbial and Chemical Sediment Data	ADEC	Spies request revision from PI 2/20/95	CE on file		PI will return May 30, 1995; DEC will resolve issue of DPD by June 30, 1995.	
95027	Kodiak Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC	On file/review complete	CE on file	On file	Project going into field June 24, 1995; final report to chief Scientist by September 30, 1995.	
95029	Population Survey of Bald Eagles in PWS	DOI (FWS)	On file/review complete	CE on file	On file		
95031	Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS	DOI (FWS)	On file/review complete	CE on file	On file		

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95038	Symposium on Seabird Restoration	DOI (FWS)	On file/review complete	Not applicable	On file		
95039	Common Murre Productivity Monitoring	DOI (FWS)	Report writing only; no DPD required	Not applicable	On file		
95041	Introduced Predator Removal from Islands - Follow-up Surveys	DOI (FWS)	On file/review complete	EA/FONSI on file (94041)	On file		
95043B	Carry-forward: Cutthroat and Dolly Varden Rehabilitation in Western PWS	USFS	In preparation; expect to submit to Chief Scientist by June 1, 1995.	EA to 30-day public review May 12, 1995.			
95052	Community Interaction/Use of Traditional Knowledge	ADFG	On file/review complete	CE on file	On file	Draft contracts were negotiated with three communities (Tatitlek, Chenega Bay, and Port Graham) to provide community liaisons.	
95058	Landowner Assistance Program	ADFG	On file/review complete	Not applicable	On file	Mailed project notification letters to 58 major landowners/operators throughout spill area. Prepared species/impact summaries for range of expected development activities. Assisted 3 landowners in identifying and planning resotration projects for FY 96.	
95060	Spruce Bark Beetle Impacts	ADEC	RSA reviewed by Executive Director in lieu of peer review	CE on file	On file	RSA to ADFG complete.	
95064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in PWS	ADFG	On file/review complete	CE on file	On file	Analyzed 1993-94 SLTDR data on movements and diving behavior; developed correction factors for survey data to account for effects of weather, date, time and tide; conducted power analysis.	

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95074	Herring Reproductive Impairment	NOAA	On file/review complete	CE on file	On file		
95076	Effects of Oiled Incubation Substrate on Survival and Straying of Wild Pink Salmon	NOAA	On file/review complete	CE on file	On file		
95086C	Herring Bay Monitoring and Restoration Studies	ADFG	On file/review complete	CE on file	On file	Signed boat contract. Finalized schedule of 4 short field trips to Herring Bay, with the first 10-day trip beginning May 14, 1995. Field monitoring and experimental work will focus on population dynamics of <i>fucus</i> and invertebrates.	
95089	Information Management System	ALL	No DPD required	Not applicable	On file		
95090	Mussel Bed Restoration and Monitoring in PWS and Gulf of Alaska	NOAA	On file/review complete	CE on file	On file	Vessel charter contract complete. Field work to begin May 12, 1995.	
95093	PWSAC: Restoration of Pink Salmon Resources and Services	ADFG	Planning funds only; no DPD required	Not applicable	On file	Portion of funds used to support Wild Stock Supplementation Workshop held January 12-13, 1995. Continued project planning.	
95100	Administration, Science Management and Public Information	All	No DPD required	Not applicable	On file		
95102-CLO	Closeout: Murrelet Prey and Foraging Habitat in Prince William Sound	DOI (FWS)	Report writing only; no DPD required.	Not applicable	On file		
95106	Subtidal Monitoring: Eelgrass Communities	ADFG	On file/review complete	CE on file	On file	Ordering supplies and conducting equipment maintenance for 1995 field season (July).	

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95110-CLO	Closeout: Habitat Protection and Acquisition	ADNR	No DPD required	Not applicable	On file	Comprehensive Habitat Protection Process: Small Parcel Evaluation and Ranking Volume III completed February 13, 1995. Nominations currently being accepted for evaluation in continuation of small parcel nomination process.	
95115	Sound Waste Management Plan	ADEC	RFP reviewed by Executive Director in lieu of peer review	CE on file	On file	Contractor chosen; first deliverable due June 1995.	
95117-BAA	Harbor Seals and EVOS: Blubber and Lipids as Indices of Food Limitation	NOAA	On file/review complete	CE on file	On file		
95121	Fatty Acid Signatures of Selected Forage Fish Species in PWS	NOAA	Spies will review RFP statement of work in lieu of DPD	CE on file			
95126	Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	Work continues in support of both large and small parcel negotiations including appraisals, title work, hazardous materials assessments, mapping of parcels as parcel configurations are refined and additional work as needed by negotiators.	
95126A	Carry-forward: Habitat Protection and Acquisition Support	ADNR	No DPD required	Not applicable	On file	See 95126.	
95127	Tatitlek Coho Salmon Release Program	ADFG	No DPD required (NEPA only)	EA in preparation		Draft EA prepared.	

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95131	Clam Restoration (Nanwalek, Port Graham, Tatitlek)	ADFG	On file/review complete	CE on file	On file	Conducted literature surveys and consulted with experts in field about culture techniques. Conducting development work at hatchery. In process of developing cooperative agreement.	
95137-CLO	Closeout: Prince William Sound Salmon Stock Identification and Monitoring Studies	ADFG	Report writing only; no DPD required	Not applicable	On file		
95138	Elders/Youth Conference	ADFG	On file/review complete	CE on file	On file	Evaluated five proposals, awarded contract, released RFP. Communities are being contacted regarding conference.	
95139	Wild Stock Supplementation Workshop	ADFG	No DPD required	Not applicable	On file	Workshop conducted January 12-13, 1995.	
95139A1	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Little Waterfall Creek Barrier Bypass	ADFG	On file/review complete	CE on file (94139A1)	On file	Preparing engineering documents for contracted part of work.	
95139B	Closeout: Otter Creek/Shrode Creek Instream Restoration	USFS	No DPD required	Not applicable (report writing only)	On file		
95139C1	Montague Riparian Rehabilitation	USFS	In preparation; expect to submit to Chief Scientist by June 1, 1995.	1993 CE on file; needs to be updated			
95139C2	Carry-forward: Salmon Instream Habitat and Stock Restoration -- Lowe River	ADFG	No DPD required (project delayed until FY 96)	Not applicable (project delayed)		1995 plans on hold pending review of EA.	

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95163A	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (interim funding)	NOAA	No DPD required (is close-out of FY 94 work)	Not applicable	On file	Contractor (UAF) presented verbal final report on April 26, 1995. Written draft report due June 1995.	
95163A1	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (APEX)	NOAA	On file/review complete	CE on file	On file		
95163B	Foraging of Seabirds (APEX)	DOI	On file/review complete	CE on file	On file		
95163C	Fish Stomach Contents Analysis (APEX)	NOAA	On file/review complete	CE on file	On file		
95163D	Tufted Puffin Foraging and Reproductive Success (APEX)	DOI	On file/review complete	CE on file	On file		
95163E	Reproduction and Foraging of Black-legged Kittiwakes (APEX)	DOI (FWS)	On file/review complete	CE on file	On file		
95163F	Factors Affecting Recovery of PWS Pigeon Guillemot Populations (interim funding)	DOI (FWS)	Report writing only; no DPD required.	Not applicable	On file		
95163F1	Reproduction of Pigeon Guillemots Populations in PWS in Relation to Food (APEX)	DOI	On file/review complete	CE on file	On file		
95163G	Seabird Energetics (APEX)	NOAA	On file/review complete	CE on file	On file		
95163I	Seabird/Forage Fish Interaction: Program Management and Integration	DOI (FWS)	On file/review complete	CE on file	On file		
95163J	Barren Islands Seabird Studies (APEX)	DOI	On file/review complete	CE on file	On file		
95163K	Using Predatory Fish to Sample Forage Fish (APEX)	DOI	On file/review complete	CE on file	On file		

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95163L	Historic Review of Ecosystem Structure in PWS/Gulf of Alaska and Abundance/ Distribution of Forage Fish in Barren Islands (APEX)	DOI	On file/review complete	CE on file	On file		
95165	PWS Herring Genetic Stock Identification	ADFG	On file/review complete	CE on file	On file		
95166	Herring Natal Habitats	ADFG	On file/review complete	CE on file	On file	Doing transects for herring egg survival and predation and other mortality factors.	
95191A	Investigating and Monitoring Oil Related Egg and Alevin Mortalities	ADFG	Received 3/28/95; under review by Spies	CE on file			
95191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA	On file/review complete	CE on file	On file		
95199-CLO	Institute of Marine Science - Seward Improvements EIS	ADFG	No DPD required	FEIS on file (94199)	On file	Cooperative agreement between ADFG and City of Seward signed for construction, operation and maintenance of Alaska SeaLife Center.	
95244	Seal and Sea Otter Cooperative Subsistence Harvest Assistance	ADFG	On file/review complete	CE on file	On file	A second review draft of a report being prepared under a contract by Alaska Sea Otter Commission was distributed.	
95255	Kenai River Sockeye Restoration	ADFG	On file/review complete	CE on file	On file		
95258	Sockeye Salmon Overescapement (Kenai/ Kodiak)	ADFG	On file/review complete	CE on file	On file	Readied field equipment for 1995 field studies on the Kenai and Tustumena Lakes and Kodiak lakes.	April field initiation work began on schedule because of late ice out.
95259	Restoration of Coghill Lake Sockeye	ADFG	On file/review complete	EA/FONSI on file (94259)	On file	Negotiating contracts for fertilizer purchases and delivery by aerial application. Preparing for field work.	

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95266	Experimental Shoreline Oil Removal	ADEC	No DPD required (literature search only)	CE on file for Phase 1; separate NEPA for Phase 2		Phase I report to Chief Scientist by June 1, 1995.	
95272	Chenega Chinook Release Program	ADFG	On file/review complete	EA/FONSI on file (94272)	On file	Smolts are currently rearing at Wally Noerenberg Hatchery. Transport of 50,000 smolts to Chenega will occur approximately May 20, 1995 depending on weather, tide, barge arrangements. Smolts will be reared on site 2 weeks before release.	
95279	Subsistence Restoration Project - Food Safety Testing	ADFG	On file/review complete	CE on file	On file	Draft RFP was prepared for a contract to assemble sampling kits for abnormalities portion of project.	
95285-CLO	Closeout: Subtidal Sediment Recovery Monitoring	NOAA	No DPD required (sample analysis and report writing only)	Not applicable	On file		
95290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance for Restoration and NRDA Environmental Samples Associated with the Exxon Valdez Oil Spill	NOAA	On file/review complete	CE on file	On file		
95320A	Salmon Growth and Mortality	ADFG	On file/review complete	CE on file	On file		
95320B	PWS Pink Salmon Stock Identification and Monitoring (CWT)	ADFG	On file/review complete	CE on file	On file	In process of hiring PI. Beginning to tag pinks as part of field season.	Proposed for continuation as 96186.
95320C	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in PWS	ADFG	On file/review complete	CE on file	On file	Boilers have been ordered and are now being installed.	Proposed for continuation as 96188.

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95320D	PWS Pink Salmon Genetics	ADFG	On file/review complete	CE on file	On file		Proposed for continuation as 96196.
95320E	Juvenile Salmon and Herring Integration	ADFG	On file/review complete	CE on file	On file	Currently in field in vicinity of Esther Island on a 15-day cruise capturing fish by fyke nets, purse seines, and tow nets to evaluate growth, survival and predation.	
95320G	Phytoplankton and Nutrients	ADFG	On file/review complete	CE on file	On file	Started 1995 field program with first PWS cruise in March.	
95320H	Role of Zooplankton in the PWS Ecosystem	ADFG	On file/review complete	CE on file	On file	Eleven-day cruise mid-March. Occupied 30 zooplankton stations including four deep stations. Prepared for April cruise and have been processing samples.	
95320I	Isotope Tracers - Food Web Dependencies in PWS (Fish, Marine Mammals, and Birds)	ADFG	On file/review complete	CE on file	On file	Interim funds were provided for lower trophic component only. New RSA for marine mammal work and analytical component was started in April 1995.	Proposed for continuation as 96170.
95320I(2)	Isotope Tracers - Food Webs of Fish	ADFG	On file/review complete	CE on file	On file	Subcontract for fish component to PWSSC commenced. Sample collection commenced -- oceanographic cruises March and April 1995, offshore fish sampling, nearshore fish sampling.	

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95320J	Information Systems and Model Development	ADFG	On file/review complete	CE on file	On file	Core PWS packet-radio repeater system completed and operational. Prototype database system and time-animated display/analysis tools for oceanographic and acoustics datasets completed. Interim model estimates for spring distribution of macrozooplankton generated; fish bioenergetics model developed and undergoing testing. Ocean modelling activity for definition of geostrophic flow in PWS in progress. Data ingestion, network administration, facilities maintenance continues.	
95320K	PWSAC: Experimental Fry Release	ADFG	On file/review complete	EA/FONSI on file	On file	Fry are currently outmigrating to holding pens. Fry will be reared and fed to projected size prior to release, tentatively schedule for late May-early June.	
95320M	Observational Physical Oceanography in PWS and the Gulf of Alaska	ADFG	On file/review complete	CE on file	On file	First cruise of FY 95 field season departed Cordova March 15; second cruise April 10. The 9 and 7-day cruises collected CTD, nutrient and phytoplankton data at 30 and 39 stations respectively, in PWS and Gulf of Alaska. Acoustic Doppler Current Profiler collected data continuously during the cruises. Aquashuttle was deployed and Optical Plankton Counter and CTD/fluorometer collected data in upper 50 meters. Analysis of CTD and ADCP from 1994 field season ongoing.	
95320N	Nearshore Fish	ADFG	On file/review complete	CE on file	On file	Tested and calibrated equipment in preparation for field work; completed winter acoustic survey of pollock in PWS.	

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95320Q	Avian Predation on Herring Spawn	USFS	On file/review complete	CE on file	On file		
95320S	Disease Impacts on PWS Herring Populations (competitive solicitation under State of Alaska two-step, RFQ-RFP process)	ADFG	On file/review complete	CE on file	On file	Virology and bacteriology completed; statistical analysis completed.	
95320T	Juvenile Herring Growth and Habitat Partitioning	ADFG	On file/review complete	CE on file	On file		
95320U	Somatic and Spawning Energetics of Herring/Pollock	ADFG	On file/review complete	CE on file	On file	Sampling scheduled to begin May 1995.	Because funding not received until April 7, 1995, will request extension of termination date.
95320Y	Variation in Local Predation Rates on Hatchery-Released Fry	ADFG	On file/review complete	CE on file	On file	Preparing for field work.	
95417	Carry-forward: Waste Oil Disposal Facilities	ADEC	RFP prepared in lieu of DPD	EA/FONSI on file (94417)	Review of RFP on file		
95422-CLO	Closeout: Restoration Plan EIS/Record of Decision	USFS	No DPD required	FEIS on file (94422)	On file		
95424	Restoration Reserve	All	No DPD required	Not applicable	Not applicable		
95427	Harlequin Duck Recovery Monitoring	ADFG	On file/review complete	CE on file	On file	Preparing for field season.	
95428-CLO	Closeout: Subsistence Planning Project	ADFG	No DPD required	Not applicable	On file	Held another series of PWS community meetings (5 meetings) followed by a regional PWS meeting. Regional meeting held in Kodiak with representatives from all 7 communities on Kodiak Island. Developed packet of proposals for consideration in FY 96 Work Plan.	

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95505B	Data Analysis for Stream Habitat	USFS	No DPD required; report writing only.	Not applicable (report writing only)	On file	Final draft of report being prepared from comment on April 1995 draft. Expect to submit redraft to Chief Scientist June 15, 1995.	

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94007	Site Specific Archaeological Restoration	ADNR	<p><u>94007A</u> - this represents completion of the 1993 field work. The draft report has been turned in to NPS, the lead agency -- NPS is waiting for results from Auke Bay Lab on sediment samples.</p> <p><u>94007B</u> - this represents the FY94 project. Annual report being prepared by ADNR under 95007A (draft report submitted to Chief Scientist March 1995; under peer review).</p>		94007A is continuation of 93006.
94020	Black Oystercatcher Interaction with Intertidal	DOI	Project is report writing for 93035 (report being drafted; expect to submit to Chief Scientist by July 1, 1995).		Continuation of 93035.
94039	Common Murre Population Monitoring	DOI/ FWS	Report being drafted; expect to submit to Chief Scientist March 15, 1995. (NOTE: Report not yet received.)	<p>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</p> <p>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.</p>	Begun as R11; continued as 93022.

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94041	Introduced Predator Removal from Islands	DOI/ FWS	Annual report submitted to Chief Scientist March 23, 1995; under peer review. (NOTE: Report accepted by Chief Scientist; not yet at OSPIC.)	Bailey, E. 1995. Introduced predator removal in the Shumigan Islands. U.S. Fish and Wildlife Service, Alaska Maritime NWR, Homer, AK. Removed 33 arctic foxes from Simeonof Island (no more believed remaining); removed 3 arctic foxes from Chernabura Island (population appeared to be dying out naturally). Censused populations of black oystercatchers and pigeon guillemots on above islands as well as on nearby islands with no foxes (controls). No oystercatcher nests found on fox islands; densities of both oystercatchers and guillemots are much less on fox islands than on fox-free ones. Recovery of nesting populations of oystercatchers and guillemots is expected to begin in 1995 on Simeonof and Chernabura islands.	
94043A1	Eshamy River Restoration (W. PWS)	USFS	Project discontinued.		
94043A2	Gumboot Creek Restoration (W. PWS)	USFS	EA being prepared under 95043 (EA submitted to Forest Service Regional Office in Juneau; comments received. Documents being finalized for signature).		
94043A3	Stream No. 508 Restoration	USFS	Project discontinued.		
94043A4	Stream No. 509 Restoration (W. PWS)	USFS	Project discontinued.		

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94043A5	Otter Creek/Lake Restoration (Knight I.)	USFS	EA being prepared under 95043 (EA submitted to Forest Service Regional Office in Juneau; comments received. Documents being finalized for signature).		
94043A6	Miners Creek/Lake Restoration (N. PWS)	USFS	Project discontinued.		
94043A7	Shrode Creek/Lake Restoration (W. PWS)	USFS	EA being prepared under 95043 (EA draft reviewed by Forest Service Regional Office in Juneau. Comments are being incorporated and final documents are being prepared for signature).		
94043B1	Sockeye Creek/Lake Restoration (Knight I.)	USFS	EA being prepared under 95043. (EA final edit underway. Signature copy to the Regional Forester with proposed date of June 15, 1995. Thirty day waiting period before implementation begins May 15, 1995.)		
94043B2	Rocky Creek/Bay Restoration (Montague)	USFS	Annual report being drafted.		

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94064	Harbor Seal Habitat Use and Monitoring	ADFG	Includes funding for report writing on Project 93046 (report accepted by Chief Scientist; not yet at OSPIC).	<p>Frost, K. and L. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG</p> <p>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.</p>	Started as MM5; continued as R73 and 93046. Also related: 94244, 94320F.
94066	Harlequin Duck Recovery Monitoring	ADFG	Project is close-out and report writing for 1993 monitoring (Project 93033). Report being drafted; expect to submit to Chief Scientist by July 1, 1995 (delayed from March 1, 1995). Contract laboratory results still not received for 1993 contaminant testing of harlequin foods (NOAA-Auke Bay); or blood chemistry, histology, reproductive physiology (Univ. California Davis); or tissue analysis ordered by Chief Scientist. Lack of results from contract labs on specimens submitted June 1993 prevents completion of the report.		93033

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94086	Herring Bay Experimental and Monitoring Studies	ADFG	Laboratory and data analysis in progress. Expect to submit annual report to Chief Scientist June 1, 1995.	Four field trips were conducted in 1994 for data and sample collections. Field activities in 1994 included data collections for population dynamics, barnacle recruitment, and water circulation studies. Laboratory analyses are continuing for mussel size-frequency distribution and mussels in filamentous algae samples collected in 1994.	Population dynamics portion of 93039.
94090	Mussel Bed Restoration and Monitoring	NOAA	Mussel chemistry nearly complete. Annual report, incorporating data from R103, 93036, and 94090 will be submitted August 1995.	Analysis of sediments collected April/May 1994 resulted in selection of 16 oiled mussel beds for restoration. Twelve mussel beds were cleaned and restored in 1994. Sediment chemistry completed; chemical analyses of mussels in process. Several sites identified as being impacted by EVOS were resampled this year.	CH1B and 93036. Other related projects include 94266 and R103.
94092	Killer Whale Recovery Monitoring	NOAA	Project is close-out and report writing of Project 93042 (report accepted by Chief Scientist; not yet 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.	Continuation of 93042.
94102	Marbled Murrelet Prey and Foraging Habitat in Prince William Sound	DOI/FWS	Report being drafted under Project 95102 (expect to submit to Chief Scientist February 5, 1995). (NOTE: Report submitted after March 31, 1995; peer reviewed and returned to PI for revision May 8, 1995.)	Kuletz, K.J., D.K. Marks, R. Burns, and L. Prestash. Marbled murrelet foraging patterns and habitat use during the breeding season in PWS. Forty-seven murrelets were radio-tagged. Foraging ranges were obtained by tracking birds with boats and planes. Birds foraged up to 60 kms. from their nests (average 10 km.). The average distance from shore was 0.6 km.	R15, 93051

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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). Work on supplement to Large Parcel Evaluation and Ranking completed November 2, 1994. Work completed on the Small Parcel Evaluation and Ranking, Phase 1. Final document released February 13, 1995 under project 95110-CLO.	94126
94126	Habitat Protection and Acquisition Fund	ADNR	No report required.	Work continues in support of large parcel negotiations, including appraisals, title work, hazardous materials assessments, mapping of parcels under negotiation, and additional work as needed by negotiators.	94110
94137	Stock Identification of Chum, Sockeye, Chinook, and Coho in PWS	ADFG	Data analysis and report writing for 93068 funded under this project (report being drafted). Expect to submit report to Chief Scientist by June 30, 1995 (delayed from March 15, 1995 due to resignation of PI).	FY94 work effort: 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. Analysis of tag recovery is expected by end of November 1994.	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

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94139A2	Port Dick Spawning Channel	ADFG	No report required (project carried forward as 95139A2).		
94139B1	Otter Creek Bypass Instream Restoration	USFS	Annual report being drafted; expect to submit to Chief Scientist by May 25, 1995.	Otter Creek bypass rehabilitation completed.	
94139B2	Shrode Creek Bypass Instream Restoration	USFS	Annual report being drafted; expect to submit to Chief Scientist by May 25, 1995.	Shrode Creek bypass renovation completed.	
94139C1	Montague Island Chum Instream Restoration	USFS	Annual report prepared December 1994; expect to submit to Chief Scientist by May 25, 1995.	For initial monitoring results, see "Montague Island Chum Salmon Restoration", 1994 Project Report, USFS Cordova Ranger District. 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	Draft report submitted to Chief Scientist; under peer review. (NOTE: Draft report peer reviewed; revised by PI; and resubmitted to Chief Scientist May 18, 1995.)	Agler, B.A., S.J.Kendall, P.E. Seiser, and D.B. Irons. 1995. Marine bird and sea otter abundance of PWS, Alaska: Trends following the T/V <i>Exxon Valdez</i> oil spill. 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.

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94163	Forage Fish Influence on Recovery of Injured Species	NOAA ADFG	NOAA: Contractor (UAF) presented verbal final report on April 26, 1995. From comments at that meeting, the contractor will prepare a written draft final report by June 1995. ADFG: Data analysis underway. All samples expected to be laboratory processed by January 31, 1995; expect to submit annual report to Chief Scientist by April 1, 1995. (NOTE: Report not yet received.)	NOAA: 11/4-11/16/94 cruise successfully completed. Hydroacoustics data analysis underway at biosonics laboratory. Bird and fish stomach data analysis ongoing. ADFG: Survey for collection of stomach samples was conducted 8/27-9/9/94. Approximately 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 (Murre Prey), and 94103 (Pigeon Gui ^{ot}).
94165	Herring Genetic Stock Identification in Prince William Sound	ADFG	Project deferred to FY 95 (95165); no report required.	Collection schedule disrupted by run failure. RFP to be issued as soon as possible to analyze the samples that have been collected and to finish the work in spring 1995.	95165

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94166	Herring Spawn Deposition and Reproductive Impairment	ADFG NOAA	<u>ADFG</u> - Laboratory and data analysis complete. Annual report being drafted; expect to submit by June 15, 1995. <u>NOAA</u> - Annual report being drafted; hydrocarbon analysis in progress.	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	Draft report submitted to Chief Scientist; under peer review. (NOTE: Draft report peer reviewed and returned to PI for revision April 11, 1995.)	D. Lindsey Hayes, Recovery monitoring of pigeon guillemot populations in PWS, Alaska. 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 sandlan 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. Also related to 94163, 94102, 94506.
94185	Coded Wire Tagging of Wild Pinks for Stock Identification	ADFG	Project includes funds for report writing of Project 93067 (redraft of report submitted to Chief Scientist December 20, 1994).	See 94320B.	Began as FS03; continued as R060A. Also related to 93014, 94320B.

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94191	Oil Related Egg and Alevin Mortalities	ADFG NOAA	<p><u>ADFG</u> - Annual report under review by genetics staff; expect to submit to Chief Scientist by June 30, 1995.</p> <p><u>NOAA</u> - Annual report being prepared; expect to submit to Chief Scientist by June 30, 1995. (Final report will be prepared after the progeny of the 1993 brood complete incubation in the spring of 1996.)</p>	<p><u>ADFG</u> - Collected gametes from 8 controlled and 8 oiled streams. These eggs are now being incubated and will be completed by December 31, 1994, for analysis in 1995.</p> <p><u>NOAA</u> - 992 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.</p>	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.		95199
94217	Prince William Sound Area Recreation Implementation	USFS	Project is close-out and report writing of Project 93065 (report submitted to OSPIC; undergoing final format review).	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project.	Close-out of 93065.

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94244	Harbor Seal and Sea Otter Co-op Subsistence Harvest Assistance	ADFG	Annual report being drafted; expect to submit to Chief Scientist by June 30, 1995.	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 draft report on harbor seal and sea otter restoration was completed and distributed for internal review. A second workshop took place on March 2, 1995.	95424
94246	Sea Otter Recovery Monitoring	DOI	Funding includes funding for report writing of Project 93043: (1) Draft report on recovery of sea otter carcasses has been submitted to the Chief Scientist and is under peer review. (2) Draft report on aerial survey of sea otters has been peer reviewed and returned to the PI for revision. (3) Third report is being drafted; expect to submit to Chief Scientist April 1, 1995.		
94255	Kenai River Sockeye Salmon Restoration	ADFG	Annual report submitted to Chief Scientist March 1, 1995; under peer review.		Began as R53; continued as 93012 and 93015.

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94258	Sockeye Salmon Overescapement	ADFG	Project includes funds for report writing on Project 93002 (final report will not be prepared until multi-year project complete; annual report accepted by Chief Scientist but not yet at OSPIC).	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.
94259	Coghill Lake Sockeye Salmon Restoration	ADFG	Draft report being prepared. (NOTE: Draft report submitted to Chief Scientist by May 19, 1995.)	Limnology and hydroacoustic sampling completed for this year. Analysis in progress. 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. Coordinate with Project 94320 (PWS System Investigation) to obtain project smolts.
94266	Shoreline Assessment and Oil Removal	ADEC	Report being drafted. (NOTE: Draft report submitted to Chief Scientist April 26, 1995; under peer review.)		94090/Mussel Bed Restoration

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94272	Chenega Chinook Release Program	ADFG	Draft annual report submitted to Chief Scientist December 30, 1994; under peer review.	50,300 chinook smolts released at Crab Bay on 5/27/94. Chenega residents reared and fed smolts in net pens prior to release. PWSAC staff instructed Chenega Natives as to proper fish culture methods.	Continuation of 93016.
94279	Subsistence Food Safety Testing	ADFG	Annual report being drafted; expect to submit to Chief Scientist by June 30, 1995.	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. Dames and Moore (contractor) submitted report on fish and shellfish collections. 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 ADEC ADFG	Project includes funding for report writing of Project 93047 (ADEC report accepted by Chief Scientist but not yet at OSPIC; ADFG report submitted to Chief Scientist and under peer review; NOAA report being drafted -- awaiting hydrocarbon analysis of sediments).	Braddock, J. and Z. Richter, Microbiology of subtidal sediments: monitoring microbial populations, ADEC.	Continuation of ST2A and 93053.
94290	Hydrocarbon Data Analysis and Interpretation	NOAA	This project will update the hydrocarbon database being submitted as the final report for ST8. The database will be updated in FY 95 under project 95290.	In FY94, 2,742 samples were received and several hundred were submitted for analysis. Conversion of database to Oracle, the standard agency database, is complete. This will allow access to anyone with security clearance.	Continuation of ST8 and 93053.

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94320A	Salmon Growth and Mortality	ADFG	Annual report submitted to Chief Scientist as part of consolidated SEA-94 report on April 15, 1995; under peer review.	Growth rate of juvenile pink salmon in 1994 in PWS slightly above average compared to 1989-1993 period. Presently analyzing growth/survival data for PWS pink salmon with emphasis on effects of number of juvenile salmon released.	
94320B	Coded Wire Tagging Recovery-PWS Pinks	ADFG	PI has resigned. Expect to submit draft annual report to Chief Scientist by June 30, 1995.	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	Draft annual report submitted to Chief Scientist March 31, 1995; under peer review.	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.

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94320D	Pink Salmon Genetics	ADFG	Contractor completed his tasks related to project; resulting report to be completed by May 24, 1995.	In ADFG lab, DNA data showupstream 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	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Walleye pollock, adult pink salmon, Pacific herring, and dolly varden trout identified as important predators on juvenile salmon in Prince William Sound. FY 94 results have been analyzed to develop study design for FY 95 effort that is expected to significantly improve hypothesis testing capability.	
94320F	Harbor Seals-Trophic Interactions	ADFG	Annual report will be submitted to Chief Scientist by June 1995 (in combination with 95064).	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. First prey samples currently being analyzed.	94064. Combined with 95064 for 1995.

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94320G	Phytoplankton and Nutrients	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	1994 field work concluded on 9/29/94. Analyzed all water samples (for nutrients, chlorophyll, phaeopigments, particulate C & N, dissolved oxygen, temperature and salinity) except for MV <i>Bering Explorer</i> cruise that just ended. Continued work on phytoplankton species identifications for samples from Lake Bay, Ester Island.	
94320H	Role of Zooplankton in PWS Ecosystem	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	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	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	<u>Food Web of Fishes</u> - Conducted isotopic analysis of approximately 500 samples (i.e, roughly 2,000 isotopic determinations). <u>Marine Mammal Trophic Energetics</u> - Conducted isotopic analysis of vibrissae of 23 seals, roughly 30 samples per whisker.	

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94320J	Information Systems and Model Development	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Repeater installation was completed and modified at two sites and further design work was completed for the HERO site at Hinchinbrook Entrance. Field testing indicated a need for design modifications to radio transmitter power levels, and flaws were discovered in some radio equipment. Reengineering by the supplier and delivery of replacements is complete for the core repeater sites on the eastern side of PWS. Approval was secured for use of the USFS repeater site on Naked Island and the repeater installed. The core PWS packet-radio repeater system is now completed and functional. This completes the last of the FY 94 tasks for this project.	
94320K	PWSAC-Experimental Fry Release	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Adult pink salmon will return in summer 1995 as a result of 1994 fry release. Marine survivals will be estimated based on coded wire tag data. Rearing and release strategies will be compared and differences in marine survival evaluated between rearing and release groups.	
94320L	PWSAC-Experimental Manipulation	ADFG	Annual report submitted to Chief Scientist December 22, 1994.	Adult fish will return in 1995. Marine survivals will be estimated for returning adults.	

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94320M	Physical Oceanography in PWS and Gulf of Alaska	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	A publication was submitted to the peer reviewed journal <i>Global Atmosphere and Ocean System</i> , titled Circulation and Hydrography in PWS, Alaska during the Spring, Summer and Fall of 1994. Analysis of CTD and ADCP from the 1994 field season is ongoing.	Most of the projects under 94320.
94320N	Nearshore Fish	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	The 1994 field season yielded over 1,000 bioacoustic data sets, which require several stages of analysis. For data management purposes, all raw data sets have been filed, and most entered into an electronic log. A majority of the post-processing software has been written, including programs to perform electroacoustic transforms, classify biological targets, and relate trawl catches to acoustic scatter. Scientists have been trained on use of the Sun workstations so that post-processing has been initiated.	
94320P	SEA Program: Program Management	ADFG	Annual report submitted to Chief Scientist April 15, 1995 as part of consolidated SEA-94 report; under peer review.	Community involvement obligations met (community visits and meetings, SEA activities bulletin).	All subprojects of 94320.
94320Q	Avian Predation on Herring Swan	USFS	Annual report being drafted.		95320Q

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94320S	Disease Impacts on Herring	ADFG	Report being drafted; expect to submit to Chief Scientist May 15, 1995.	Because of the important of <i>ichthyophonus</i> in herring morbidity in 1994, all previous Pacific herring sampled from PWS and submitted to UC Davis (1989, 1990, 1991, 1992) were re-screened for <i>ichthyophonus</i> . Prevalence in these samples was never more than 15% and was distributed fairly evenly among liver, kidney, and spleen, but was never in the olfactory nares.	
94417	Waste Oil Disposal Facilities	ADEC	No report required (project carried forward as 95417).		95417
94422	Environmental Impact Statement for the Draft Restoration Plan	USFS	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. FEIS distributed; additional copies available through OSPIC.		95422 funded to complete ROD and Administrative Record

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94423	Oil Spill Public Information Center (OSPIC)	ALL	No report required.	<p>During the quarter ending 3/31/95, OSPIC staff received 427 visitors, responded to 945 requests for information, processed 88 interlibrary loans, loaned 146 items, distributed 1,950 documents, and acquired 27 books, 4 periodicals, 3 reports, 2 maps, and 1 database. Approximately 106 documents were added to the Trustee Council Administrative Record and 88 Marine Ecosystem posters were sold. During the week of 3/24/95, OSPIC received its 8,000th visitor since its opening in September 1990. OSPIC staff began format review of NRDA/Restoration Project final reports; provided support for the 1995 Restoration Workshop; and explored options for the destination of Information Management System products, including SLED, AnchorNet, and the OSPIC World Wide Web site.</p>	
94424	Restoration Reserve	DOL	No report required.	<p>At its December 2, 1994 meeting, the Trustee Council voted to place \$24 million into a Restoration Reserve fund within the court registry investment system and to invest the funds in ladder securities. Motion to establish the Restoration Reserve Fund has not been filed with the court.</p>	
94425	Marine Mammal Book	NOAA	Book printed and being distributed.		

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94427	Experimental Harlequin Duck Breeding Survey	ADFG	Annual report being drafted; expect to submit to Chief Scientist by August 1, 1995.	PI met with other experts and examined harlequin collections at American Museum of Natural History and the Denver Museum of Natural History to develop age and sex criteria.	B11, R71, 93033, 94066, 95427 and nearshore ecosystem projects.
94428	Subsistence Restoration Planning and Implementation	ADFG	Annual report being drafted; expect to submit to Chief Scientist by June 30, 1995.	Trustee Council funded several subsistence restoration projects developed through this planning program as part of its FY 95 Work Plan. Additionally, the state Trustees met in November and approved additional projects to be supported with criminal settlement funds. Project staff followed up with communities to develop project descriptions for the next funding cycle.	
94504	Genetic Stock Identification of Kenai River Sockeye	ADFG	Project is report writing for 93012 (report being drafted; expect to submit to Chief Scientist by June 30, 1995). (NOTE: Expected submission date delayed from February 30, 1995.)		Begun as 93012. Also related to 94255.

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94505	Information Needs for Habitat Protection	USFS ADFG DOI	Project is close-out and report writing for Project 93051 (ADFG report on Stream Habitat Assessment undergoing final formatting review at OSPIC; DOI report on Radio Tagging Murrelets accepted by Chief Scientist; USFS report on Channel Type Classification and DOI report on Marbled Murrelet Habitat Identification peer reviewed and returned to PIs for revision; USFS report undergoing final formatting review at OSPIC). (NOTE: DOI report on Marbled Murrelet Habitat Identification accepted by Chief Scientist April 3, 1995.)	Sundet, K. 1994. Stream habitat assessment project: PWS and Lower Kenai Peninsula. ADFG	Close-out of 93051. Also related to 94110, 94126.
94506	Pigeon Guillemot Recovery	DOI	Project is report writing of Project 93034 (report accepted by Chief Scientist; not yet 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.	Report writing for 93034; also related to 94173.
94507	Symposium Proceedings Publication	NOAA	Forty manuscripts finalized and with the publisher (American Fisheries Society, AFS) in format editing and layout. Ten manuscripts are ready to be sent to AFS and the remaining 13 manuscripts are in review/revision status. The book will probably be over 1200 pages, 50% longer than first estimated.		

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93002	Sockeye Salmon Overescapement	ADFG	Project continued as 94258. Final report will not be prepared until multi-year project complete. Annual report accepted by Chief Scientist February 22, 1995; not yet at OSPIC.	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.	95259 (glacial lake ecology information may be transferable), 95255. Project is a continuation of FS27, 93002, 94258.
93003	Salmon Egg to Pre-emergent Fry Survival	ADFG NOAA	The results of this project will be presented in two reports: (1) ADFG report submitted to OSPIC; undergoing final formatting review. (NOTE: Available at OSPIC May 15, 1995.) (2) NOAA report not due until after the progeny of the 1993 brood complete incubation in Spring 1996.	(1) Sharr, S. and J.E. Seeb. 1994. Injury to salmon eggs and preemergent fry in Prince William Sound. Oil exposures completed for 1992 and 1993 brood years. 1992 brood pink salmon died from bacterial kidney disease; spawning not possible. Precautions to ensure survival of 1993 brood have been taken. Persistence of elevated embryo mortalities in oiled streams in 1992 indicate possible genetic damage to wild pink salmon populations from the <i>Exxon Valdez</i> oil spill. Preliminary laboratory studies support the genetic hypothesis. Additional laboratory studies demonstrate dose response of pink salmon embryos when incubated in gravel exposed to crude oil from the <i>Exxon Valdez</i> .	Started in 1989 as FS2 and continued as R60C and 94191. Also related to R60AB. Project 93067 provides fisheries managers with information critical for protecting these chronically damaged wild pink salmon populations from overexploitation in commercial fisheries.

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93006	Site Specific Archaeological Restoration	ADNR	Draft report submitted to Chief Scientist March 31, 1995; under peer review.	<p>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 <i>Exxon Valdez</i> 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 <i>Exxon Valdez</i> 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.</p>	The remaining site assessments will be completed in 1994 under Project 94007B.
93012	Genetic Stock Identification of Kenai River Sockeye Salmon	ADFG	Data analysis and report writing funded under project 94504 (report being drafted; expect to submit to Chief Scientist by June 30, 1995.) NOTE: Submission delayed from February 28, 1995.	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.	Continued as 94504. Related to 93002 as well as to 93012 and 93015, which continued as 94255. Collection of spawning samples is being conducted under 93015.

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93015	Kenai River Sockeye Salmon Restoration	ADFG	Final report will not be prepared until multi-year project complete. Redraft of annual report submitted to Chief Scientist on September 19, 1994. (NOTE: Annual report accepted by Chief Scientist on May 8, 1995.)	Successful collection of baseline and fishery genetic samples. Successful in-season hydroacoustic survey of Upper Cook Inlet by subcontractor.	Genetic samples analyzed under 93012. Projects 93012 and 93015 began as R52 and continued as 94255.
93016	Chenega Bay Chinook and Silver Salmon (NEPA Compliance)	ADFG	No report required.		Continued as 94272. Also related to 93017.
93017	Subsistence Food Safety Survey and Testing	ADFG NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	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. Depends on information from all resource restoration projects as well as the shoreline oiling survey. Other related subsistence projects include 94428 and 93016.
93024	Restoration of Coghill Lake Sockeye Salmon Stock	ADFG USFS	Completion of report (being drafted by ADFG) delayed due to intensive field sampling in SEA program. Expect to submit report to Chief Scientist by February 15, 1995. (NOTE: Report not yet received.)	Monitoring showed the need for modifying both the type and concentrations of fertilizer.	Continued as 94259 and 95259.

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93032	Cold Creek Pink Salmon Restoration (NEPA Compliance)	ADFG	Project removed from Work Plan.		R105
93033	Harlequin Duck Restoration	ADFG	Report writing funded under project 94066 (report being drafted; expect to submit to Chief Scientist by July 1, 1995; submission date delayed from March 1, 1995). Contract lab results still not received for contaminant testing of harlequin foods (NOAA-Auke Bay), indications of oil exposure or physiological effects on reproduction from blood and tissue samples (UC-Davis). Absence of lab analysis is preventing assessment of continued harlequin exposure to oil and connections to reproductive impairment.	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. Also related to B2, CH1B, R103, 93036, 93045, 93053, 94159 and 94427. 93036 documents continued oil in prey species. 93045 surveys corroborate harlequin status in Prince William Sound. 93053 is the hydrocarbon database for sea duck samples.
93034	Pigeon Guillemot Recovery	DOI	Report accepted by Chief Scientist; not yet 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. 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. Also related to B9 and 93045.

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93035	Black Oystercatchers / Oiled Mussel Beds	DOI	Report being drafted under Project 94020 (expect to submit report to Chief Scientist July 1, 1995). NOTE: Expected submission date delayed from July 1, 1995.	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.	Related to B12, R103, 93036, and 93045. Continued as 94020.
93036	Oiled Mussel Beds	DOI/ NBS	Two reports are being prepared under this project. NOAA and DOI both expect to submit reports to Chief Scientist by April 15, 1995. (NOTE: DOI report submitted to Chief Scientist for peer review April 28, 1995. NOAA report delayed to August 1, 1995.)	Cusick, J.A. and G.B. Irvine. 1995. Geographical extent and recovery monitoring of intertidal oiled mussel beds in the Gulf of Alaska affected by the <i>Exxon Valdez</i> oil spill. Documented 27 of 66 sampled mussel bed sediments within PWS with total petroleum hydrocarbons greater than 10,000 ng/g wet weight. 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 5000 ng/g wet weight.	Continued as 94090 and 94266 (the portion of the project that examines the chemical and physical degradation of oil along national park coastlines). Other related projects include B11, CH1B, R71 and 93033.

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93038	Shoreline Assessment	ADEC	Draft report peer reviewed; returned to PI for revision August 10, 1994. (NOTE: Piper completed his revisions according to reviewer's comments in December 1994; Gibeaut is incorporating them into technical report which is due to ADEC June 1, 1995. Gibeaut's contract had to be extended.)	Piper, E., et al. 1993 shoreline assessment. Surface oil has become stable. Subsurface oil has decreased substantially since 1991. Oiling is discontinuous throughout the study site.	93036
93039	Herring Bay Experimental and Monitoring	ADFG	Draft report submitted to Chief Scientist March 2, 1995; under peer review.	Highsmith, R.C., M.S. Stekoll, P. van Tamelen, A.J. Hooten, S.M. Saupe, L. Deysher, and W.P. Erickson. 1995. Herring Bay monitoring and restoration studies. School of Fisheries and Ocean Sciences, UAF. Examination of dominant intertidal alga, <i>fucus gardneri</i> , has shown that larger plants were removed from intertidal in areas affected by spill/clean-up. Where <i>fucus</i> cover was reduced, abundance of ephemeral algae often increased. Populations of grazing invertebrates, e.g., limpets and periwinkles, showed reduced densities at oiled sites in upper intertidal. Initially, barnacle recruitment was lower in quadrats on tar-covered rocks than clean quadrats, but differences disappeared at most sites over time. <i>Fucus</i> germlings and filamentous algae continued to have lower densities and percent cover on oiled than non-oiled substrates. Recovery occurring in lower/middle intertidal zones and normal community interactions returning. Upper intertidal continues to exhibit damage; recovery may take additional 2-5 years.	Evolved from CH1A and R102 and continued as 94086. Also related to B11, R103, ST1A, ST1B, and ST2A.

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93041	Comprehensive Monitoring	NOAA	Project discontinued.		
93042	Killer Whale Recovery	NOAA	Data analysis and report writing funded as Project 94092 (report accepted by Chief Scientist; not yet 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. AB pod number has increased by one (a calf) to a total of 26. The 14 missing pod members were not present in 1993.	Continued as 94092.
93043	Sea Otter Demographics and Habitat	DOI/ NBS	The results of this project will be presented in three reports (funded under 94246): (1) Draft report on recovery of sea otter carcasses accepted by Chief Scientist; not yet at OSPIC. (2) Draft report on aerial survey of sea otters has been peer reviewed and was returned to the PI for revision December 15, 1994. (3) Report on sea otter demographics being drafted; expect to submit to Chief Scientist by May 31, 1995. (NOTE: Submission delayed from April 1, 1995.)	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 pre-spill distribution. Age- and sex-specific survival rates generated from carcass data for sea otters in Prince William Sound.	

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93045	Marine Bird / Sea Otter Surveys	DOI	Redraft of report submitted to Chief Scientist December 2, 1994. (NOTE: Report accepted by Chief Scientist May 19, 1995.)	Agler, B.A., P.E. Seiser, S.J. Kindall and D.B. Irons. 1994. Marine bird and sea otter populations in Prince William Sound, Alaska: Population trends following the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage. Overall marine bird population estimates in Prince William Sound have not changed significantly since 1989, but were 41% lower than 1972-1973 estimates. Rates of increase of goldeneyes and surfbird populations were higher in the unoiled zone of Prince William Sound than in the oiled zone, whereas oystercatchers increased more rapidly in the oiled zone.	Started as part of B2 and continued as 93045 and 94159.
93046	Habitat Use, Behavior, and Monitoring of Harbor Seals in PWS	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	Frost, K.J. and L.F. Lowry. 1994. Habitat use, behavior, and monitoring of harbor seals in Prince William Sound, Alaska. ADFG Counts of seals at 25 trend sites in Prince William Sound were similar during pupping and molting in 1992 and 1993. However, 1993 pupping counts were 23% lower than in 1989. Molting counts were similar to 1989 postspill counts, but 27% lower than 1988 counts. Sixteen seals satellite-tagged since 1992 indicate that seals in central Prince William Sound haul out and feed near the same sites with little movement to other areas. Feeding usually occurs in depths of 100-200 meters, with a maximum recorded dive depth of 404 meters.	Started in 1989 as MM5, which was closed out as R73. It continued as 94064. Other related projects are 94244 and one of the studies in 94320. ADFG is also conducting similar studies in southeast Alaska and near Kodiak.

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93047	Subtidal Monitoring	ADEC ADFG NOAA	The results of this project will be presented in three reports: (1) NOAA sediments - Hydrocarbon analysis of subtidal sediments complete. Data analysis and report preparation in progress; expect to submit report to Chief Scientist by July 1995. (2) DEC microbiology - Report accepted by Chief Scientist. Not yet at OSPIC. (3) ADFG eelgrass - Response to peer review comments submitted to Chief Scientist March 10, 1995.	(2) Braddock, J. Microbiology of subtidal sediments: monitoring and microbial populations. (3) Jewett, S., et al. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in PWS 1989-93. As a follow-up to previous studies from 1989-1991, the numbers and activity of oil-degrading microorganisms were measured in sediments collected in 1993. Preliminary results suggest some contamination remains in subtidal sediments. However, generally very low numbers were found where visible oil was present (e.g., subsurface sediments, Northwest Bay). Analysis of 1993 eelgrass data complete. Several infaunal and epifaunal taxa more abundant in oiled bed sites than control sites. Amphipods less abundant in oiled sites. Sea urchins are more abundant. Hemosiderosis in fishes from oiled sites.	Started as ST1A and continued as 94285. Other related projects include ST1A, ST1B and 93053.
93049	Monitor Murre Colony Recovery	DOI/ FWS	Report being drafted. Expect to submit to Chief Scientist February 17, 1995. (NOTE: Draft report submitted to Chief Scientist for peer review April 28, 1995.)	Roseneau, D. 1995. Common murre Restoration monitoring in the Barren Islands, Alaska, 1993. U.S. Fish and Wildlife Service, AK Maritime NWR, Homer, AK. Murre productivity in the Barren Islands was 0.4 - 0.6 chicks per nest site in 1993, up from near zero in 1989. Population counts on plots were similar to or higher than in previous postspill years.	Started as R11 and continued as 94039. Also related to B3. (Formerly in EVOS database as 93022.)

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93051	Habitat Information for Anadromous Streams and Marbled Murrelets	ADFG DOI USFS	<p>The results of this project will be presented in 5 reports (being prepared under 94505):</p> <p>(1) ADFG Stream Habitat Assessment/PWS & Lower Kenai-report accepted by Chief Scientist; not yet at OSPIC.</p> <p>(2) USFS Habitat Protection Info. for Channel Type Classification Study- draft report peer reviewed; returned to PI for revision October 31, 1994.</p> <p>(3) DOI Pilot Study on Capture and RadioTagging of Murrelets in PWS-report accepted by Chief Scientist.</p> <p>(4) DOI Information Needs for Habitat Protection: Marbled Murrelet Habitat Identification - report peer reviewed and returned to PI for revision. (NOTE: Accepted by Chief Scientist April 3, 1995.)</p> <p>(5) USFS Upland Nesting Habitat of Marbled Murrelet -report submitted to OSPIC; undergoing formatting review.</p>	<p>(1) Sundet, K. 1994. Stream habitat assessment project: Prince William Sound and Lower Kenai Peninsula. ADFG</p> <p>(3) Burns, R.A., L.M. Prestash, and K.J. Kuletz. 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.</p> <p>(5) Characterization of the upland nesting habitat of the marbled murrelet in the <i>Exxon Valdez</i> oil spill area.</p> <p>Late season surveys, sites at the heads of bays, low elevations, high percentages of forest cover, and large trees were all consistent predictors of high murrelet activity. Radar performed better than humans in detecting murrelets and was cheaper than boat-based or ground-based surveys by humans. About 995 km of shoreline and 117 km² of uplands were surveyed for anadromous fish streams on private lands on the lower Kenai Peninsula and in Prince William Sound, resulting in discovery of 186 anadromous streams totaling about 57 km. Stream habitat parameters were collected along all streams, upper extents of anadromous distribution were documented and streams were mapped by GIS.</p>	<p>Evolved from R15 and R47. Information will be integrated into the restoration GIS (93062) and supplement 93033. Also related to 93045. Project closeout in FY 94 as 94505.</p>

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93053	Hydrocarbon Database	NOAA	No report required.	Continuing project with updating and quality control of hydrocarbon data. Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.	Continued as 94290. This project supports most restoration projects.
93057	Damage Assessment GIS	ADNR	Project completed; no report required.	Cataloged and plotted over 160 maps for public access at OSPIC. Provided mapping and database support for damage assessment studies.	Supported numerous damage assessment projects, including B11, FS13, AW1, and CH1A.
93059	Habitat Identification Workshop	USFS	Project completed; no report required.	Identified parcels of non-public land containing critical habitat necessary for the recovery of injured resources and services.	93046, 93051, 93059, 93063, 93064, and 93065.
93060	Accelerated Data Acquisition	USFS	Project completed; no report required.	Collected and organized existing resource data needed for the analysis of private lands in the oil spill area.	93046, 93051, 93059, 93063, 93064, and 93065.
93062	Restoration GIS	ADNR	Project completed; no report required.	Provided technical mapping and database support for restoration projects. Generated spill area map and land status maps for Kachemak Bay, Seal Bay, and Eyak lands in support of habitat protection data analysis and negotiations. Plotted maps to provide public access to EVOS information.	Supported numerous restoration projects, including 93038, 93063, 93064 and R47.

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93063	Anadromous Stream Surveys	USFS ADFG	Project is data analysis and report writing for anadromous stream portion of R105. Two reports are being prepared. (1) USFS report accepted by Chief Scientist; not yet at OSPIC. (2) ADFG draft report submitted to Chief Scientist; under peer review. (NOTE: Draft report peer reviewed; returned to PI for revision May 2, 1995.)	(1) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. (2) Willette, M. Survey and evaluation of instream habitat and stock restoration techniques for wild pink and chum salmon.	Started as R105 and continued as 93063 and 94139.
93064	Imminent Threat Habitat Protection	ADNR	No report required.	See "Opportunities for Habitat Protection/Acquisition" (2/16/93) and "Comprehensive Habitat Protection Process; Large Parcel Evaluation & Ranking, Volume I" (11/30/93). Imminent Threat Evaluation and the first round of Large Parcel Evaluation were completed. \$7.5 million from settlement funds was combined with \$14.5 million from other sources for the purchase of private inholdings in Kachemak Bay. \$29,950,000 was committed from the most recent court request for the initial payment for purchase of private land near Seal Bay on Afognak Island. The total purchase price of this transaction is \$38,700,000 with the balance to be paid in three annual installments.	Data sources: 93051, 93059, 93060, 93062, and 93063.

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93065	Prince William Sound Recreation	USFS ADNR	Report writing for this project funded under Project 94217 (report accepted by Chief Scientist; not yet at OSPIC).	Menefee, W. and S. Hennig. 1994. Prince William Sound recreation project. Recreation Injury Statement (10/93) was incorporated into the Draft Restoration Plan. Final report includes a prioritized list of projects and other recommendations for restoration of recreation in Prince William Sound.	Continued as 94217.
93066	Alutiiq Archeological Repository	ADEC	No report required.	Opening ceremony held May 13, 1995.	
93067	Pink Salmon Coded Wire Tag Recovery	ADFG	Redraft of report submitted to Chief Scientist December 20, 1994. (NOTE: Draft report peer reviewed; returned to PI for revision April 12, 1995.)	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, 94185 (report preparation) and 94320B.
93068	Non-Pink Salmon Coded Wire Tag Recovery	ADFG	Data analysis and report writing funded under project 94137 (report being drafted; expect to submit to Chief Scientist by June 30, 1995). NOTE: Expected submission date delayed from March 15, 1995).	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. Other related projects are 93024 and 94320. 93024 was designed to restore the natural population of sockeye salmon from Coghill Lake.
93AD	Administrative Director's Office		No report required.		

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93FC	Financial Committee		No report required.		
93RT	Restoration Team Support		No report required.		

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AD	Administrative Director's Office	ALL	No report required.		
ARC1	Archaeological Survey	ADNR	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
AW1	Surface Oil Maps	ADEC	Report drafted but not yet submitted to Chief Scientist.		
B02	Boat Surveys	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Klosiewski, S.P. and K.K. Laing. 1994. Marine bird populations of Prince William Sound, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as 93045 and 94159.

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

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

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B07	Storm Petrels Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>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.</p>	
B08	Kittiwakes Damage Assessment Closeout	DOI	Draft report peer reviewed; returned to PI for revision January 4, 1994. Handling of hydrocarbon data needs to be resolved with Chief Scientist.	<p>Irons, D.B. 1994. Effects of the <i>Exxon Valdez</i> oil spill on black-legged kittiwake colonies in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	TS1
B09	Pigeon Guillemots Damage Assessment Closeout	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Oakley, K.L. and K.J. Kuletz. 1994. Population, reproduction and foraging of pigeon guillemots at Naked Island, Alaska, before and after the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Anchorage.</p> <p>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.</p>	93034 and 94173

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B11	Harlequin Ducks Damage Assessment Closeout	ADFG	Redraft of report peer reviewed; returned to PI for revision November 22, 1994. Expect to resubmit to Chief Scientist by July 1, 1995. (NOTE: Expected submission date delayed from March 1, 1995.)	Petroleum exposure confirmed in four species of sea ducks. Hydrocarbons in food, liver and bile. Diverse intertidal prey used by ducks. Blue mussels are a key contaminated prey. 1990-1992 low harlequin breeding densities and negligible harlequin stream activity and production in western PWS. A compendium of information on oiled harlequin coast and stream habitats is produced in a supplement to the report as a resource for future studies.	Project conducted in conjunction with R71 and continued as 93033. Also related to B2, CH1B, TS1, R103, and 93036.

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B12	Shorebirds Damage Assessment Closeout	DOI	The results of this project will be presented in two reports: (1) Report on migrant shorebirds has been accepted by Chief Scientist but is not yet available at OSPIC. (2) Report on black oystercatchers has been accepted by Chief Scientist but is not yet available at OSPIC.	(1) Martin, P.D. 1993. Effects of the <i>Exxon Valdez</i> oil spill on migrant shorebirds using rocky intertidal habitats of Prince William Sound, Alaska, during Spring 1989. U.S. Fish and Wildlife Service, Anchorage. (2) Andres, B.A. 1994. The effects of the <i>Exxon Valdez</i> oil spill on black oystercatchers breeding in Prince William Sound, Alaska. U.S. Fish and Wildlife Service. Anchorage. (1) Spring migrant shorebirds (surfbirds and black turnstones) escaped impacts because shorelines used by these species (particularly around Montague Island) were largely unoiled. (2) Black oystercatcher breeding was disrupted and hatching success reduced. Chicks raised on oiled beaches grew more slowly than chicks raised on unoiled beaches, perhaps due to ingestion of contaminated food.	Related to R17, R103 and 93035.
CH1A	Coastal Habitat Damage Assessment	USFS	Report submitted to OSPIC; undergoing final formatting review.	Comprehensive assessment of coastal habitat. 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. Also related to B11, FS13, R102, MM6, ST3A, TM3, and TS1.

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CH1B	Hydrocarbons in Mussels	NOAA	Draft report submitted to Chief Scientist; under peer review. (NOTE: Peer reviewed report returned to PI for revision May 8, 1995.)	<i>Exxon Valdez</i> oil is located in several sites. Reductions in hydrocarbons are seen at several sites in PWS over 1989.	R103
FS01	Spawning Area Injury	ADFG	Project delayed due to over-commitment of PI, and resignation of subsequent PI. Report has been assigned to new PI; expect to submit draft report to Chief Scientist by August 15, 1995. [Note: Report will present findings from both FS01 and R60B.]	For preliminary results, see 1989, 1990 and 1991 NRDA Draft Status Reports. 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.	Project conducted in conjunction with R60B. Also related to 93012, 93015 and 94255. FS1, FS2, FS3, FS4A, and FS4B measured oil damages to specific life stages. FS28 incorporated their results into a model to estimate population level damages.

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FS02	Pre-emergent Fry	ADFG	Redraft of report submitted to Chief Scientist May 2, 1994. (NOTE: Draft report peer reviewed; returned to PI for revision May 6, 1995.)	Measured higher embryo mortalities in oil-contaminated streams than in unoiled streams.	Project conducted in conjunction with R60C; continued as 93002 and 94191. Also related to R60A/B, 93012, 93015, 94255. 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.
FS03	Coded-Wire Tags Damage Assessment	ADFG	Redraft of report submitted to Chief Scientist October 14, 1994. (NOTE: Draft report peer reviewed; returned to PI for revision April 12, 1995.)	Sharr, S., et al. Coded wire tag studies on PWS salmon, 1989-91. Unable to detect significant differences in survival to adults from fry emerging from oiled and control streams. Also unable to detect significant difference in survival of hatchery fish reared in oiled versus unoiled areas of Prince William Sound.	Project conducted in conjunction with R60A; continued as 93067, 93068, 94185, and 94320B. FS1, FS2, FS3, FS4A, and FS4B measured oil damages to specific life stages. FS28 incorporated their results into a model to estimate population level damages.

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FS04A	Early Marine Salmon Damage Assessment	ADFG	Redraft of report submitted to Chief Scientist December 2, 1994.	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 damage
FS04B	Juvenile Pinks	NOAA	Report submitted to OSPIC. Final copies currently being printed.	Wertheimer, A.C., A.G. Celewycz, M.G. Carls, and M.V. Sturdevant. 1994. Impact of the oil spill on juvenile pink and chum salmon and their prey in critical nearshore habitats. NOAA, NMFS, Auke Bay Lab, Juneau, AK. Documented exposure and contamination of juvenile salmon in Prince William Sound. Contamination was associated with reduced growth. Ingestion of oil or oiled prey was route of contamination.	FS4A, AW3, and ST3A.

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FS05	Dolly Varden Damage Assessment	ADFG	Redraft of report submitted to Chief Scientist February 1, 1994. (NOTE: Draft report peer reviewed and returned to PI for revision after March 31, 1995.)	Two populations of Dolly Varden and cutthroat trout emigrated from lakes into the wake of the spill. Growth from 1989-1990 was 24% and 22% slower for recaptured subadult and adult Dolly Varden and 36% to 43% slower for subadult and adult populations of cutthroat trout in populations associated with the oil. This difference persisted through 1991 for cutthroat trout but not for Dolly Varden. Chronic starvation and direct exposure to petrogenic hydrocarbons were hypothesized as effects leading to reduced growth and accelerated mortality of both Dolly Varden and cutthroat trout.	Combined with R90.

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FS11	Herring Injury	ADFG	Redraft of report submitted to Chief Scientist March 14, 1995. [Note: Report will include nine articles prepared for the Canadian Journal of Fisheries and Aquatic Science and will be included in the proceedings of the EVOS symposium.]	Brown, E. D., et al. Injury to Prince William Sound Following the <i>Exxon Valdez</i> Oil Spill. Adult herring migrating to the spawning grounds in 1989 were exposed to oil. Exposure to oil continued throughout 1989 and into 1990. Internal tissues were damaged but the short- and long-term effects are speculative. There may have been a short-term effect which inhibited egg deposition and a long-term reproductive impairment (reduced survival of offspring). Eggs were deposited in oiled areas in 1989. Larvae hatched from exposed embryos suffered reduced survival.	Similar to 94166 (Herring Spawn Deposition). Also related to 94165 and 94320.
FS13	Effects of Hydrocarbons on Bivalves	ADFG	Draft report peer reviewed; returned to PI for revision April 26, 1993. Expect to submit redraft to Chief Scientist August 15, 1995.		Clams are important prey for ducks, sea otters, river otters, and bears. This study is related to studies of these species and to 93017.

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FS27	Sockeye Salmon Overescapement	ADFG	Report submitted to OSPIC; undergoing final formatting review.	<p>Schmidt, D.C., J.P. Koenings, and G.B. Kyle. Predator induced changes in diet vertical migration of copepods in Skilak Lake, Alaska: A hypothesis to explain the decrease in overwinter survival of juvenile sockeye salmon (<i>Onchorhynchus nerka</i>).</p> <p>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.</p>	Continued as 93002 and 94258. R53 acquired new information to facilitate management of anticipated reduced future runs. R1 examined potential for hatchery-reared fry in Red Lake, but forecasted returns make the project unfeasible.
FS28	Run Reconstruction	ADFG	Draft report peer reviewed; returned to PI for revision August 31, 1993. Expect to submit redraft to Chief Scientist in April 1995.	<p>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.</p>	Through this project, results from FS1, FS2, FS3, FS4A and FS4B were incorporated into a model to estimate population level damage.

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FS30	Database Management	ADFG	Report submitted to OSPIC; undergoing final formatting review.	<p>DiCostanzo, C. and B.P. Simonson. 1993. Database Management. Final Report, State/Federal Natural Resource Damage Assessment. 14 pp.</p> <p>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.</p>	This database provides a repository for all NRDA and restoration projects information.
MM1	Humpback Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Dalheim, M. and O. von Ziegesar. 1993. Effects of the Exxon Valdez oil spill on the abundance and distribution of humpback whales (<i>megaptera novaeangliae</i>) in Prince William Sound. NMFS, Seattle, WA and North Gulf Oceanic Society, Homer, AK.</p> <p>No documented injury.</p>	
MM2	Killer Whales Damage Assessment	NOAA	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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.</p> <p>Whales missing from AB and AT pods. A total of 14 AB pod members lost from 1988-1990 due to unknown causes.</p>	

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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 (not yet at OSPIC); 4 reports have been peer reviewed and returned to PIs for revision.	(1) Ballachey, B.E. Biomarkers of damage to sea otters in PWS following potential exposure to oil spilled from the T/V <i>Exxon Valdez</i> . [Report accepted by Chief Scientist. Not yet at OSPIC.] (2) Ballachey, B.E. and D.M. Mulcahy. Hydrocarbon residues in tissues of sea otters (<i>Enhydra lutris</i>) collected from southeast Alaska. [Draft report returned to PI for revision June 29, 1994; expected resubmission date delayed from April 1, 1995 to June 1, 1995] (3) Ballachey, B.E. and D. M. Mulcahy. Hydrocarbons in hair, liver and intestine of sea otters (<i>Enhydra lutris</i>) found dead along the path of the <i>Exxon Valdez</i> oil spill [Draft report peer reviewed and returned to PI for revision July 13, 1993; expect to submit redraft to Chief Scientist May 19, 1995.) (4) Bodkin, J.L., D.M. Mulcahy and C. Lensink. Age-specific reproduction in female sea otters (<i>Enhydra lutris</i>) from southcentral Alaska: analysis of reproductive tracts. [Report accepted by Chief Scientist, not yet at OSPIC] (5) Bodkin, J.L. and M.S. Udevitz. An intersection model for estimating sea otter mortality from the <i>Exxon Valdez</i> oil spill along the Kenai Peninsula. [Report accepted by Chief Scientist, not yet at OSPIC]	93043

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MM6(2of3)	Sea Otter Damage Assessment	DOI	See MM6(1of3).	<p>(6) Burn, D.M. Boat-based population surveys of sea otters (<i>Enhydra lutris</i>) in PWS in response to the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist; not yet at OSPIC.]</p> <p>(7) DeGange, A.R., D.C. Douglas, D.H. Monson and C. Robbins. Surveys of sea otters in the Gulf of Alaska in response to the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist; not yet at OSPIC.]</p> <p>(8) Doroff, A.M. and J.L. Bodkin. Sea otter foraging behavior and hydrocarbon levels in prey following the <i>Exxon Valdez</i> oil spill. [Draft report peer reviewed; returned to PI for revision May 27, 1994. Expected date of resubmission delayed from April 1, 1995 to June 1, 1995.]</p> <p>(9) Doroff, A.M. and A.R. DeGange. Experiments to determine drift patterns and rates of recovery of sea otter carcasses following the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(10) Lipscomb, T.P., R.K. Harris, R.B. Moeller, J.M. Fletcher, R.J. Haebler and B.E. Ballachey. Histopathologic lesions associated with crude oil exposure in sea otters. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(11) Lipscomb, T. P., R.K. Harris, A.H. Rebar, B.E. Ballachey and R.J. Haebler. Pathological studies of sea otters. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p>	

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MM6(3of3)	Sea Otter Damage Assessment	DOI	See MM6(1of3).	<p>(12) Monnett, C. and L.M. Rotterman. Movements of weanling and adult female sea otters in PWS after the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(13) Monnett, C. and L.M. Rotterman. Mortality and reproduction of female sea otters in PWS. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(14) Monnett, C. and L.M. Rotterman. Mortality and reproduction of sea otters oiled and treated as a result of EVOS. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(15) Monson, D.H. and B.E. Ballachey. Age distributions and sex ratios of sea otters found dead in PWS following the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(16) Mulcahy, D.M. and B.E. Ballachey. Hydrocarbon residues in tissues of ten oiled sea otters (<i>Enhydra lutris</i>) recovered from PWS following the <i>Exxon Valdez</i> oil spill. [Draft report returned to PI for revision May 31, 1994.]</p> <p>(17) Rebar, A.H., B.E. Ballachey, D.L. Bruden and K.A. Kloecker. Hematology and clinical chemistry of sea otters captured in PWS following the <i>Exxon Valdez</i> oil spill. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(18) Rotterman, L.M. and C. Monnett. Mortality of sea otter weanlings in eastern and western PWS during the winter of 1990-91. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p> <p>(19) Udevitz, M.S., J.L. Bodkin and D.P. Costa. Sea otter detectability in boat based surveys of PWS. [Report accepted by Chief Scientist. Not yet at OSPIC.]</p>	

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R011	Murre Recovery Monitoring	DOI	Redraft of report submitted to Chief Scientist March 27, 1995. (NOTE: Draft peer reviewed and returned to PI for revision April 28, 1995.)	<p>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 murrens based on observations at breeding colonies four years after the T/V <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service. Homer</p> <p>Numbers of murrens 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.</p>	Continued as 93022 and 94039. Also related to B3.
R015	Marbled Murrelet Restoration Study	DOI	<p>The results of this project will be presented in two reports:</p> <p>(1) Redraft of report submitted to Chief Scientist February 2, 1995.</p> <p>(2) Report on murrelets' upland habitat accepted by Chief Scientist. Not yet at OSPIC.</p>	<p>(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</p> <p>(2) Kuletz, K.J., N.L. Naslund, and S.K. Marks. 1994. Identification of marbled murrelet nesting habitat in the <i>Exxon Valdez</i> oil spill zone. U.S. Fish and Wildlife Service, Anchorage.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout).

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R047	Stream Habitat Assessment	ADFG	Report submitted to OSPIC; undergoing final formatting review.	<p>Kuwada, M. and K. Sundet. 1993. Stream Habitat Assessment Project: Afognak Island. Habitat and Restoration Division Technical Report No. 93-3, <i>Exxon Valdez</i> Restoration and Habitat Protection Planning. 104 pp.</p> <p>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.</p>	Continued as part of 93051 and 94505 (closeout). Supported evaluation of land for habitat protection.
R053	Kenai River Sockeye Salmon Restoration	ADFG	Annual status report accepted by Chief Scientist February 22, 1995. Not yet at OSPIC.	<p>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.</p>	R59 analyzed genetic samples collected by this project.
R059	Genetic Stock Identification	ADFG	Draft report peer reviewed; returned to PI for revision September 13, 1993. Expect to resubmit report to Chief Scientist by February 15, 1995. (NOTE: Redraft submitted to Chief Scientist April 20, 1995.)	<p>Seeb, Jim and Lisa. Assessment of genetic stock structure of salmonids.</p> <p>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.</p>	R53 collected spawning samples.

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R060A/B	Prince William Sound Pink Salmon	ADFG	R060A: Redraft of report submitted to Chief Scientist. (NOTE: Draft report peer reviewed; returned to PI for revision April 12, 1995.) R060B: Findings will be presented in report being prepared under Project FS01 (project delayed due to over-commitment of PI; primary author changed to rectify problem; will submit draft report to Chief Scientist by April 15, 1995).	R060A: Sharr, S., et al. Coded wire tag studies on PWS salmon, 1992. R060A: The CWT program helped reduce the commercial harvest on damaged pink salmon populations by providing fishery managers with timely inseason fishery stock composition estimates. R060B: The escapement project provided improved pink salmon escapement information which was essential for the precise fisheries management required to protect damaged wild stocks.	Continued as 93067, 94185 (report preparation) and 94320B. Also related to R60C, which monitors and investigates mechanisms for oil damage to early life stages of pink salmon population.

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R060C	Pink Salmon Egg/Fry	ADFG NOAA	The results of this project will be presented in two reports: (1) ADFG report accepted by OSPIC; copies currently being made. (NOTE: Report available at OSPIC May 15, 1995.) (2) NOAA activity report has been submitted (a final report will be prepared, under a future project number (/191B), after the progeny of the 1993 brood complete incubation in the spring of 1996).	(1) Sharr, Samuel and C. Peckham. 1994. Coded wire tag studies on Prince William Sound salmon, 1992. ADFG (1) Persistence of elevated mortalities among embryos in oiled streams versus those in unoiled streams suggests genetic damage. (2) Oil exposures completed for 1992 and 1993 brood years. All 1992 brood pinks died from bacterial kidney disease by June 1994. Spawning of 1993 brood expected in September 1995, with survival of progeny to be determined in early 1996.	Continued as 93003 and 94191. Other related projects include B11, CH1B, R60AB, R103, and 93036.

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R071	Harlequin Duck Restoration and Monitoring	ADFG	Redraft of report submitted to Chief Scientist February 16, 1995.	<p>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).</p>	B11 corroborated harlequin status in Prince William Sound. R103 documented continued oiled prey.
R073	Harbor Seals	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>T.R. Loughlin (ed.), Marine Mammals and the <i>Exxon Valdez</i>, Academic Press.</p> <p>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.</p>	Started in 1989 as MM5. Continued as 93046 and 94064.

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R090	Dolly Varden Char Monitoring	ADFG	Report being prepared under Project FS05 (redraft of report submitted to Chief Scientist February 1, 1994).	<p>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.</p>	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 DOI	No report required.	<p>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.</p>	Supported numerous restoration projects.

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R102	Herring Bay Experimental and Monitoring Study	ADFG	Draft report peer reviewed; returned to PI for revision May 29, 1994.	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. 203 pp. Cover of the dominant intertidal alga, <i>Fucus gardneri</i> , was reduced at oiled/cleaned sites. <i>Fucus</i> recruitment was poor in the mid- to upper intertidal, probably due to lack of shelter from desiccation and heating by adult plants. Limpet densities continued to be lower in the upper intertidal. Recovery appeared to be occurring in the lower intertidal zone in 1990-1991 and in the upper intertidal in 1993. Results have been incorporated into an interaction web to elucidate potential oil spill effects on community dynamics.	Continued as 93039 and 94086. Also related to B11, CH1A, R103, and TM3.

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R103	Oiled Mussels	ADFG NOAA DOI	<p>The results of this project will be presented in four reports:</p> <p>(1) NOAA report accepted by Chief Scientist; not yet at OSPIC.</p> <p>(2) DOI/FWS report being prepared under Project 93035 (expect to submit report to Chief Scientist July 1, 1995.)</p> <p>(3) ADFG redraft of report submitted to Chief Scientist January 24, 1994.</p> <p>(4) DOI/NPS report accepted by Chief Scientist; not yet at OSPIC.</p>	<p>(1) Babcock, M., P.M.Rounds, C. Brodersen and S. Rice. 1993. Recovery monitoring and restoration of intertidal oiled mussel beds in Prince William Sound impacted by the <i>Exxon Valdez</i> oil spill. NOAA, NMFS, Auke Bay Laboratory, Juneau, Alaska.</p> <p>(4) Andres, B. 1993. Potential impacts of oiled mussel beds on higher organisms: Black oystercatchers. U.S. Fish and Wildlife Service, Anchorage, AK.</p> <p>(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. (4) 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.</p>	Continued as 93036, 94090, and 95090. Other related projects include B11, B12, CH1B, R7, TM3, and 93033.

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R104A	Site Stewardship	DOI	Report accepted by Chief Scientist. Not yet at OSPIC.	Corbett, D.G. 1994. Development of the Alaska Heritage Stewardship Program for protection of cultural resources at increased risk due to the <i>Exxon Valdez</i> oil spill. U.S. Fish and Wildlife Service, Anchorage, AK. Increased public knowledge of archaeological sites following the spill led to increased vandalism. A stewardship program to train local residents to protect cultural resources was developed.	93006, 94007
R105	Instream Survey Restoration Implementation Planning	ADFG USFS	The results of this project will be presented in two reports: (1) ADFG redraft of report submitted to Chief Scientist January 6, 1995. (2) USFS report being prepared under Project 93063 (report accepted by Chief Scientist; not yet at OSPIC).	(2) Weidemeyer, K. Survey and evaluation of instream habitat and stock restoration techniques for anadromous fish. A number of sites were reviewed, evaluated, and ranked for possible instream restoration efforts. A number of efforts have subsequently been implemented.	Continued as 93063. Related projects include FS1, R47, 93024, 93032, and 94139.
R106	Dolly Varden Restoration	ADFG	Peer review complete; returned to PI for revision May 14, 1993. (NOTE: Report accepted by Chief Scientist May 8, 1995.)	 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.

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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	Draft report submitted to Chief Scientist; under peer review.	<p>Petroleum hydrocarbon induced injury to subtidal sediment resources.</p> <p>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.</p>	Continued as 93047 and 94285. Other related projects include ST1B.
ST1B	Subtidal Microbial	ADEC	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>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</p> <p>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.</p>	93047

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ST2A	Shallow Benthic	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC.	<p>Jewett, Stephen C., T.A. Dean, L.J. Haldorson, D.A. Laur, M. Stekoll, and L. McDonald. 1993. The effects of the <i>Exxon Valdez</i> oil spill on shallow subtidal communities in Prince William Sound, Alaska 1989-91.</p> <p>At oiled sites there was a decrease in some subtidal organisms relative to unoiled sites. Partial recovery observed in 1991.</p>	Continued as 93047 and 94285. Other related projects include B11, CH1A, R103, and TM3.
ST2B	Deep Water Benthic	ADFG	Draft report peer reviewed; returned to PI for revision February 23, 1995.	<p>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.</p>	CH1A, ST1B, ST2A, ST4, ST5, ST6, ST7, ST8, and TS1.

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ST3A	Caged Mussels Damage Assessment	NOAA	<p>The results of this project will be presented in two reports:</p> <p>(1) Draft report on caged mussels peer reviewed and returned to PI for revision October 2, 1993.</p> <p>(2) Draft report on hydrocarbons in water peer reviewed and returned to PI for revision November 15, 1993.</p> <p>Expect to resubmit both reports to Chief Scientist in August 1995. (NOTE: Expected submission date delayed from March 1995.)</p>	<p>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.</p>	ST3B
ST3B	Sediment Traps Damage Assessment	ADEC	Draft report peer reviewed; returned to PI for revision February 22, 1995.	<p>Sale, David M., J. Gibeaut, J. Short. Nearshore subtidal transport of hydrocarbons and sediments following the <i>Exxon Valdez</i> oil spill. DEC</p> <p>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.</p>	ST3A and ST4

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ST4	Fate and Toxicity Damage Assessment	NOAA	Report submitted to OSPIC; undergoing final formatting review.	<p>Fate and toxicity of spilled oil from the <i>Exxon Valdez</i>. 1994.</p> <p>Results indicate that some toxicity was still associated in 1990 and 1991 with sediments from lower intertidal zones of heavily oiled sites. The fate of <i>Exxon Valdez</i> oil will include transformation of most constituents (through biodegradation and photooxidation) mainly into carbon dioxide and water, although some constituents may persist indefinitely.</p>	AW4, ST1, ST2, ST3A, ST3B, ST7, TS1 and response studies.
ST5	Shrimp	ADFG	Report accepted by Chief Scientist. Not yet at OSPIC. (NOTE: Report submitted to OSPIC May 3, 1995.)	<p>Trowbridge, C. 1992. Injury to Prince William Sound spot shrimp.</p> <p>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.</p>	Relates to all other fish studies. Shrimp are a principle food source for fish and some whales.

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ST6	Rockfish Damage Assessment	ADFG	Report accepted by Chief Scientist; not yet at OSPIC. (NOTE: Report available at OSPIC May 15, 1995.)	<p>Hoffman, A. Injury to demersal rockfish and shallow reef habitats in PWS, 1989-91.</p> <p>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.</p>	ST2A and ST2B
ST7	Demersal Fishes Damage Assessment	NOAA	Draft report peer reviewed; returned to PI for revision November 17, 1994.	<p>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.</p>	ST1A
ST8	Sediment Data Synthesis	NOAA	Report submittal deadline delayed to December 31, 1995. Report will include electronic database.	<p>Analyzed several thousand environmental samples, provided numerical correlations directly related to oil, and assessed associations of observed biological effects with concentrations of <i>Exxon Valdez</i> oil.</p>	TS1, TS3, and 93053.

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