

# *Exxon Valdez* Oil Spill Final and Annual Reports

December 2018



Exxon Valdez Oil Spill Trustee Council

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# **General Information**

# **EVOSTC Final Reports**

Since 1989, the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) has funded projects to assess the impacts of the oil spill and restore the environment. Over the years, projects have included natural resource damage assessment (NRDA) studies, restoration projects and Gulf Ecosystem Monitoring and Research Program (GEM) projects. To date the Council has published these final reports in the following series:

- *Exxon Valdez* Oil Spill Trustee Council Project Final Reports (2013- present)
- *Exxon Valdez* Oil Spill Restoration Project Final Reports (1993-2012)
- Exxon Valdez Oil Spill Gulf Ecosystem Monitoring and Research Project Final Reports (2002-2009)
- *Exxon Valdez* Oil Spill State/Federal Natural Resource Damage Assessment Final Reports (1989-1992)

# **EVOSTC Annual Reports**

Prior to 2002, annual progress reports for multi-year NRDA and restoration projects were published in two report series listed below. Annual reports for projects funded since 2002 are not published in a series, but are available at the EVOSTC web site in the Project Search database.

- Exxon Valdez Oil Spill State/Federal Natural Resource Damage Assessment Annual Reports
- Exxon Valdez Oil Spill Restoration Project Annual Reports

# **Project and Report Numbers**

For purposes of identification each project funded by the EVOS Trustee Council is assigned a unique number. Project reports have the same number. Final reports for multi-year projects are numbered according to the year in which the work was completed. Over time the Trustee Council's project numbering system has evolved to meet the changing needs of the Restoration Program.

<u>NRDA studies</u>: Funded from 1989 to 1992, NRDA studies were assigned an alpha-numeric study number indicating the topic of the study. Examples: Air/Water 1, Bird 3, and Fish/Shellfish 4.

<u>Restoration projects and GEM projects prior to 2003</u>: Restoration and GEM projects funded between 1993 and 2002 have five-digit numbers. The first two digits indicate the funding year. The last three digits identify the project. Since FY 1994, the three-digit project identifier has remained the same each year for multi-year projects. Example: Hydrocarbon Data Analysis – 94290, 95290, 96290.

<u>Restoration and GEM projects funded between 2003 and 2009</u>: Although some GEM *transition* projects were funded in 2002, most GEM projects were funded between 2003 and 2009. These project numbers have six digits. The first two digits indicate the funding year. The last three digits identify the project and remain the same each year for multi-year projects. The third digit was added to give the numbering scheme the potential to handle a larger number of projects funded in a long-term program. Example: Dynamics of the Alaska Coastal Current – 030670, 040670.

<u>Restoration projects funded from 2010</u>: Beginning in 2010, projects numbers contain eight digits. The first two digits designate the current funding year, the second two digits represent the year the initial funding was authorized by the Trustee Council, and the last four digits are the project identifier.

In 2012, the Long-Term Monitoring Program, Long-term Herring Research and Monitoring Program, Lingering Oil projects and NOAA Harbor Protection program were initiated. Final reports for these projects and programs are published in a new series named "*Exxon Valdez* Oil Spill Trustee Council Project".

# How to Find EVOSTC Reports

A list of EVOSTC final and annual reports is maintained at the EVOS Trustee Council website.

EVOSTC reports are available as listed below. Reports are also submitted to the Alaska State Library and the National Technical Information Service in fulfillment of state and federal depository requirements.

Final reports are available full-text at:

- <u>EVOS Trustee Council website</u>. The Trustee Council's database of restoration projects is searchable via Project Search by project number, researcher, or project title.
- <u>ARLIS</u> catalog. The catalog is searchable by title, project number, principal investigator, additional authors, series title, subject heading, and keywords. A searchable notes field in the catalog record describes the report and provides additional access points. From the catalog record, a link takes the researcher to the full-text report. Paper copies of reports are available for check out at ARLIS and are loaned worldwide through interlibrary loan.
- <u>National Technical Information Service (NTIS)</u>. Copies of most final reports can be purchased in electronic, paper or microfiche formats through NTIS at (703) 487-4650 or www.ntis.gov.

Annual reports are available full-text at:

- <u>EVOS Trustee Council website</u>. The Trustee Council's database of restoration projects is searchable via Project Search by project number, researcher, or project title.
- <u>ARLIS</u> catalog. Annual reports for projects funded prior to 2002 are available full-text through the ARLIS catalog, which is searchable by title, project number, principal investigator, additional authors, series title, subject heading, and keywords. A searchable notes field in the catalog record describes the report and provides additional access points. From the catalog record, a link takes the researcher to the full-text report. Paper copies are available for check out and are loaned worldwide through interlibrary loan.

For assistance in locating EVOSTC publications, contact:

Alaska Resources Library and Information Services (ARLIS) 3211 Providence Drive, Suite 111 Library Building Anchorage, AK 99508

(907) 27-ARLIS (272-7547) reference@arlis.org www.arlis.org

# EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL REPORTS December 2018

\* = new additions to this list

# *Exxon Valdez* Oil Spill Trustee Council Project Final Reports

Final reports in this series cover Trustee Council projects funded from FY 2013 to the present.

# \*12120114-F

Coletti, H. A., and T. L. Wilson. 2018. Nearshore marine bird surveys: Data synthesis, analysis and recommendations for sampling frequency and intensity to detect population trends. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 12120114-F). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*13120111-I

Heintz, R., F. Sewall, L. Schaufler, and C. Fugate. 2018. Fatty acid analysis as evidence for winter migration of age-0 herring in Prince William Sound. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 13120111-I), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*13120111-J

Vollenweider, J.J., J. Maselko, and R.A. Heintz. 2018. What is the age at first spawning for female herring in PWS? *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 13120111-J), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*13120111-N

Moffitt, S.D. and Haught, S. 2018. Scales as Growth History Records *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 13120111-N). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*14120111-В

Bishop, M.A. 2018. Tracking seasonal movements of adult Pacific herring in Prince William Sound. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 14120111-B), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*15120111-D

Boswell, K.M., A.M. Zenone, and W.S. Pegau. 2018. Non-lethal sampling: In situ estimation of juvenile herring sizes. *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 15120111-D), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*15120111-G

Rand, P.S. 2018. PWS Herring Program - Intensive surveys of juvenile herring, *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 15120111-G), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*15120111-R

Pegau, W.S. 2018. Aerial survey support. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 15120111-R), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111

Pegau, S., et.al. 2018. Herring Research and Monitoring Program. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-A

ishop, M.A. and S. Lewandoski. 2018. Validation of acoustic surveys for Pacific herring (*Clupea pallasii*) using direct capture. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-A), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-С

Bochenek, R., Buckelew, S., Turner, C., Koeppen, W. 2018. Data management support for the *Exxon Valdez* Oil Spill Trustee Council Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-C). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-Е

Rand, P.S. and R.E. Thorne. 2018. Expanded adult herring surveys. *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-E). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-F

Rand, P.S. 2018. Juvenile herring abundance index. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-F), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-Н

Hoover, H., and W.S. Pegau. 2018. Herring Research and Monitoring Outreach. *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 14120111-H), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-К

Hershberger, P.K. 2018. Herring Disease Program, *Exxon Valdez* Oil Spill Long-term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-K), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-L

Gorman, K.B., T.C. Kline, M.E. Roberts, F.F. Sewall, R.A. Heintz and W.S. Pegau. 2018. Herring Condition Monitoring. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-L), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-0

Pegau, W.S. 2018. Herring Research and Monitoring coordination and logistics. *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-O), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-P

Wildes S. L., Hv. Nguyen, and J. R. Guyon. 2018. Genetic stock structure of herring in Prince William Sound. *Exxon Valdez* Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-P), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120111-Q

Branch, T.A. 2018. Modeling the population dynamics of Prince William Sound herring. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120111-Q), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120112

Jennings, L., E. Ammann and D. Landsman. 2018. NOAA Harbor Protection Program/Project Management, NOAA Harbor Protection Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120112), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120112-A

Patton, I.R. 2018. Harbor water quality improvement program. *Exxon Valdez* Oil Spill NOAA Harbor Protection Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120112-A), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114

McCammon, M., K. Hoffman, K. Holderied. D. R. Aderhold, and T. H. Neher. 2018. Long-term monitoring of marine conditions and injured resources and services. *Exxon Valdez* Oil Spill Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-A

Batten, S.D. and R. Brown. 2018. Long-term monitoring of plankton populations on the Alaskan shelf and in the Gulf of Alaska using Continuous Plankton Recorders. Long-Term Monitoring Program (Gulf Watch Alaska) Final Report, (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-A), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-В

Hoffman, K. C., and M. E. McCammon. 2018. Long-term monitoring: program coordination and logistics and outreach. Long-term Monitoring Program (Gulf Watch Alaska) Final Report, (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-B), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-С

Bishop, M. A. 2018. Long-term monitoring of seabird abundance and habitat associations during late fall and winter in Prince William Sound. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-C), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-D

Bochenek, R., S. Buckelew, C. Turner, W. Koeppen. 2018. Data management support for the EVOSTC Long-Term Monitoring Program. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-D). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-Е

Campbell, R. W. 2018. Long term monitoring of oceanographic conditions in Prince William Sound. *Exxon Valdez* Oil Spill Trustee Council Project Final Report (Project 16120114-E), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-G

Doroff, A., and K. Holderied. 2018. Long-term monitoring of oceanographic conditions in Cook Inlet/Kachemak Bay to understand recovery and restoration of injured near-shore species. *Exxon Valdez* Oil Spill Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-G), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-Н

Holderied, K., and D. Aderhold. 2018. Science coordination and synthesis for the long-term monitoring program. Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-H), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-I

Hollmén, T. E., L.A. Sztukowski, S.A. Sethi. 2018. Long-Term Monitoring: Synthesis and conceptual modeling - conceptual ecological modeling. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-I), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-J

Hopcroft, R. R., S. L. Danielson, S. L. Strom, and K. Kuletz. 2018. The Seward Line: Marine ecosystem monitoring in the Northern Gulf of Alaska. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-J). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-К

Kaler, R., E. Labunski, and K. J. Kuletz. 2018. Prince William Sound marine bird surveys. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-K), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-L

Konar B., K. Iken, and A. Doroff. 2018. Long-term monitoring: nearshore benthic ecosystems in Kachemak Bay. Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-L). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-M

Matkin, C., D. Olsen, G. Ellis, G. Ylitalo, R. Andrews. 2018. Long-term killer whale monitoring in Prince William Sound/ Kenai Fjords. *Exxon Valdez* Oil Spill Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee CouncilProject 16120114-M), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-N

Moran, J. R. and J. M. Straley. 2018. Long-term monitoring of humpback whale predation on Pacific herring in Prince William Sound. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project: 16120114-N), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-0

Arimitsu, M. L., J. F. Piatt, B. Heflin, V. von Biela, S. K. Schoen. 2018. Monitoring long-term changes in forage fish distribution, abundance and body condition. *Exxon Valdez* Oil Spill Long-term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-O). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-P

Weingartner, T. J. and S. L. Danielson. 2018. Long-term monitoring of oceanographic conditions in the Alaska Coastal Current from hydrographic station GAK1 over 1970-2016. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-P), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-R

Coletti, H., D. Esler, B. Ballachey, J. Bodkin, G. Esslinger, K. Kloecker, D. Monson, B. Robinson, B. Weitzman, T. Dean, and M. Lindeberg. 2018. Gulf Watch Alaska: Nearshore benthic systems in the Gulf of Alaska. Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-R), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120114-S

Lindeberg, M. R., M. G. Carls, and J. Maselko. 2018. Lingering oil: Extending the tracking of oil levels and weathering (PAH composition) in Prince William Sound through time. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 12120014-S). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16120120

Jones, M. B., R. Blake, J. Couture and C. Ward. 2018. Collaborative data management and holistic synthesis of impacts and recovery status associated with the *Exxon Valdez* oil spill. *Exxon Valdez* Oil Spill Long-Term Monitoring Program (Gulf Watch Alaska) Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120120), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16150114 –Т

Bochenek, R., S. Buckelew, C. Turner, W. Koeppen. 2018. Supplemental data management support for EVOSTC monitoring programs. Long-Term Monitoring Program (Gulf Watch Alaska) Final Report; Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16120114-T). *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# \*16160111-S

Bishop, M.A. 2018. Annual herring migration cycle: expanding acoustic array infrastructure. *Exxon Valdez* Oil Spill Long-Term Herring Research and Monitoring Program Final Report (*Exxon Valdez* Oil Spill Trustee Council Project 16160111-S), *Exxon Valdez* Oil Spill Trustee Council, Anchorage, Alaska.

# *Exxon Valdez* Oil Spill Restoration Project Final Reports

Final reports in this series cover restoration projects funded from FY 1993 to FY 2012, and also three projects that were funded in FY2015 (indicated by \*)

# 93003

Sharr, S., J.E. Seeb, G.B. Bue, A. Craig, and 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. (NTIS No. PB95-966003)

# 93012/94255-2

Seeb, L.W., C. Habicht, W.D. Templin, J.W. Fetzner Jr., R.B. Gates, and J.E. Seeb. 1995. Genetic diversity of sockeye salmon (*Oncorhynchus nerka*) of Cook Inlet, Alaska, and its application to restoration of injured populations of the Kenai River, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93012 and 94255-2), Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Genetics Laboratory, Anchorage, Alaska. (NTIS No. PB98-134042)

# 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. (NTIS No. PB95-966008)

# 93024

Willette, T.M., G.S. Carpenter, S.R. Carlson, and G.B. Kyle. 1995. Restoration of the Coghill Lake sockeye salmon stock, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93024), Alaska Department of Fish and Game, Cordova, Alaska. (NTIS No. PB99-106973)

# 93033-1

Patten, S.M., Jr., R. Gustin, and T.W. Crowe. 2002. Restoration monitoring of harlequin ducks (*Histrionicus histrionicus*) in Prince William Sound and Afognak Island, Alaska, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93033-1), Alaska Department of Fish and Game, Division of Wildlife Conservation, Anchorage, Alaska. (NTIS No. PB2003-102848)

# 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. (NTIS No. PB96-194808)

# 93035

Andres, B.A. 1996. Effects of persistent shoreline oil on reproductive success, chick growth rates and foraging ecology of black oystercatchers, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93035), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB99-110173)

# 93038

Gibeaut, J.C. and E. Piper. 1997. Shoreline oiling assessment of the *Exxon Valdez* oil spill, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93038), Alaska Department of Environmental Conservation, Juneau, Alaska. (NTIS No. PB99-137192)

# 93042/94092

Dahlheim, M.E. and C.O. Matkin. 1994. Assessment of injuries and recovery monitoring of Prince William Sound killer whales using photo-identification techniques, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93042/94092), U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, Washington. (NTIS No. PB96-194667)

# 93043-2

Bodkin, J.L. and M.S. Udevitz. 1996. 1993 Trial aerial survey of sea otters in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93043-2), National Biological Service, Anchorage, Alaska. (NTIS No. PB96-194683)

# 93043-3

Udevitz, M.S., B.E. Ballachey, and D.L. Bruden. A population model for sea otters in western Prince William Sound, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93043-3), National Biological Service, Anchorage, Alaska. (NTIS No. PB96-194691)

# 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. (NTIS No. PB96-194873)

# 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. 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. (NTIS No. PB96-194865)

#### 93047-1

O'Clair, C.E., J.W. Short, and S.D. Rice. 1996. Recovery of sediments in the lower intertidal and subtidal environment, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93047-1), National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, Juneau, Alaska. (NTIS No. PB96-194832)

# 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. (NTIS No. PB96-194816)

#### 93049

Roseneau, D.G., A.B. Kettle, and G.V. Byrd. 1995. Common murre restoration monitoring in the Barren Islands, Alaska, 1993, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93049), U.S. Fish and Wildlife Service, Alaska Maritime National Wildlife Refuge, Homer, Alaska. (NTIS No. PB96-204334)

#### 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. (NTIS No. PB96-195029)

# 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. (NTIS No. PB96-196886)

# 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. (NTIS No. PB96-194931)

# 93051-3

Burns, R.A., L.M. Pretash, and K.J. Kuletz. 1994. Pilot study on the capture and radio tagging of murrelets in Prince William Sound, Alaska, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93051-3), U.S. Fish and Wildlife Service, Anchorage, Alaska. (NTIS No. PB2000-102847)

# 93065/94217

Menefee, W. and S. Hennig. 1995. Prince William Sound recreation project, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 93065/94217), Alaska Department of Natural Resources and U.S. Department of Agriculture, Chugach National Forest, Anchorage, Alaska. (NTIS No. PB2006-104368)

# 93067

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# Bird 5

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[The following economic reports were not published by the Exxon Valdez Oil Spill Trustee Council, but are included so this list of damage assessment reports will be complete. Not available from NTIS.]

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# *Exxon Valdez* Oil Spill Restoration Project Annual Reports

Annual reports in this series cover multi-year restoration projects funded prior to FY 2002. Annual reports funded after FY 2002 are available on the EVOSTC website: www.evostc.state.ak.us

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