

Curriculum Vitae

**John A. Strand, Ph.D., Fellow A.I.F.R.B.
Fisheries Biologist**

Dr. Strand is an internationally recognized fisheries biologist specializing in studies to determine potential effects of human activities on aquatic resources. During his 30 years of experience, he has conducted and managed a wide variety of projects, large and small, in Washington, California, Alaska, British Columbia, Guam, and Venezuela. These included field studies to evaluate environmental impacts of engineered structures, and field and laboratory studies to assess ecological risks from discharge of contaminants to surface waters, including sewage, storm water, oil, other organic chemicals, radionuclides, and heavy metals. Of key interest is the design of strategies to mitigate impacts on threatened, endangered, or sensitive aquatic species, and their habitats.

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Education:

Ph.D.; University of Washington; Fisheries Biology; 1975
M.S.; Lehigh University; Biology; 1962
B.A.; Lafayette College; Biology; 1960

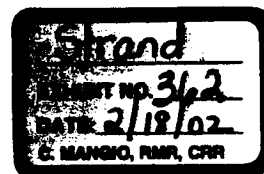
Employment:

1999- Principal Biologist, Columbia Biological Assessments, Richland, WA. Also, Adjunct Faculty, Environmental Sciences and Regional Planning Program, Washington State University Tri-Cities, Richland, WA.
1996-1999; Water Quality Planner,
King County Department of Natural Resources, Seattle, WA.
1993-1995; Senior Biologist and Group Leader,
EA Engineering, Science, and Technology, Inc, Redmond, WA.
1990-1993; Manager and Co-Chair, Exxon Valdez Oil Spill Restoration Planning Working Group,
NOAA/NMFS, Auke Bay, AK.
1969-1990; Senior Research Scientist and Manager, Battelle, Pacific Northwest Laboratory; Richland and Sequim, WA. Also, Affiliate Faculty (1987-1991), School of Fisheries, University of Washington,
Seattle, WA.

Registration/Certification:

Fellow, American Institute of Fisheries Research Biologists; 1993
Certified Fishery Scientist (No. 442), American Fishery Society; 1969

Specialized Training:



Health and Safety Training for Hazardous Waste Sites; 1996, 1997, 1998
Wetland Delineation, Shoreline Community College; 1996
Litigation Support Short Course, EA Engineering, Science, and Technology, Inc.; 1994
Project Manager Training, EA Engineering, Science, and Technology, Inc.; 1994
NEPA Refresher Training, US Forest Service; 1991

Experience:

Resource Management and Planning— From 1992-1993, was Federal Co-chair of *Exxon Valdez* Oil Spill Restoration Planning Work Group in Anchorage, Alaska. Responsible for developing a restoration plan, and for designing, implementing long-term restoration and monitoring projects for injured resources and human services. Served as member of the Sequim Bay Watershed Management Committee from 1987-1990 and helped prepare the *Sequim Bay Watershed Management Plan*. The Plan focused on mitigation of cumulative effects on salmon and other fishery resources of nonpoint source pollution from timbering, road building, agriculture, marina operations, and failed septic systems throughout the watershed. In 1999, served as member of King County Biological Review Panel with responsibility to evaluate King County policies and programs (e.g., Sensitive Areas Ordinance, Clearing and Grading Code, Surface Water Design Manual, and basin plans) most relevant to conservation of threatened chinook salmon.

Regulatory Compliance—From 1970 to 1990, conducted and managed numerous reviews of Section 316 (a) (b) Demonstrations of Compliance with the Clean Water Act. As a basis for applying Section 316 requirements and procedures, conducted assessments of power plant impacts on marine and estuarine resources. In 1988, performed chemical analyses and bioassays in support of National Pollution Discharge Elimination System (NPDES) Permit renewals at oil industry facilities in Port Valdez and Cook Inlet, Alaska. In 1994, designed monitoring plans to address "special conditions" of NPDES permit renewals at two coastal power plants in California. Following provisions of Endangered Species Act (ESA), in 1995 evaluated agency biological opinion and conducted field studies to assess potential impacts of construction and operation of a proposed gold mine on habitat use by endangered spring and summer run chinook salmon in the Salmon National Forest, Salmon, Idaho.

Environmental Impact Assessment—From 1970 to 1994, conducted and managed numerous studies to assess impacts of technology development on aquatic and terrestrial ecosystems, including wetlands. Assessed environmental impacts for nuclear power plants, petroleum and synthetic fuel refineries, mines and smelters, an acoustic measurement station, a marine mammal holding area, a solid waste management facility, an aviation fuels pipeline, and a bridge. In 1994, directed an environmental assessment of alternate sites for construction of replacement housing at McChord Air Force Base, Washington.

Aquatic Toxicology and Risk Assessment—From 1970 to 1999, studied fate and effects of chemical contaminants in aquatic systems. In 1980, developed exposure pathway models and determined potential ecological and human health risks associated with metals and radionuclides released from a hypothetical uranium mine and smelter at three locations in British Columbia. In 1989, studied persistence of spilled Bunker C fuel oil in beach sediments and in shellfish found intertidally in Olympic National Park, Washington. In 1990, evaluated survey design and sampling procedures to determine the fate of oil refinery and coking plant wastes in sediments and benthic biota in Amuay Bay, Venezuela. In 1995, prepared sampling plans to study fate of metals and organic contaminants in groundwater and marine sediments in Liberty Bay, Washington. From 1996 to 1998, studied ecological risks of combined sewer overflows in the Duwamish River and in Elliott Bay, Washington, with particular interest on potential impacts to out migrating chinook and chum salmon.

Selected Publications and Presentations:

Concannon, D., D. Finney, R. Fuerstenberg, H. Haemmerle, G. Lucchetti, A. Johnson, and J. Strand. Chapter 6. Biological Review Panel. 1999. *In* Return of the Kings, Strategy for the Long-Term

Conservation and Recovery of the Chinook Salmon. King County's Response Report to the Proposed Endangered Species Act Listing. King County Endangered Species Act Policy Coordination Office, Seattle, Washington.

Strand, J., K. Stark, K. Silver, C. Laetz, T. Georgianna, T. McElhany, K. Li, and S. Mickelson. 1998. Bioaccumulation of Chemical Contaminants in Transplanted and Wild Mussels in the Duwamish River Estuary, Puget Sound, Washington. *In* Proceedings of Puget Sound Research '98. Puget Sound Water Quality Action Team. March 12-13, 1998, Seattle, Washington.

Strand, J.A. 1993. Restoration Planning Following the *Exxon Valdez* Oil Spill. *In Exxon Valdez Oil Spill Symposium. Abstract Book. Exxon Valdez Oil Spill Trustee Council, University of Alaska Sea Grant College Program, and the American Fisheries Society. February 2-5, 1993, Anchorage, Alaska.*

Strand, J.A., V.I. Cullinan, E.A. Crecelius, T.J. Fortman, R.J. Citterman and M.L. Fleischmann. 1992. Fate of Bunker C fuel oil in Washington coastal habitats following the December 1988 Nestucca oil spill. *Northwest Sci.* 66 (1):1-14.

Cullinan, V.I., E.A. Crecelius, and J.A. Strand. 1991. Evaluation of Lagoven, S. A., Refinery Environmental Monitoring Plan of Amuay Bay, Venezuela. Final Report. Prepared for Bariven Corporation by Battelle, Pacific Northwest Laboratories, Richland, Washington.