

# **CURRICULUM VITAE**

**Janice Marie Boyd**

## **EDUCATION**

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1979 BSc (Honours) Zoology, University of Western Ontario, London, Ontario

## **WORK EXPERIENCE**

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### ***Program Scientist, Natural Resources Sector Unit***

*Environmental Protection Operations Directorate, Environmental Stewardship Branch, Environment Canada, 201 – 401 Burrard Street, Vancouver, B.C.*

1996 to present:

- Administers the Environmental Effects Monitoring (EEM) program for mills in B.C. under the *Pulp and Paper Effluent Regulations* (PPER) of the *Fisheries Act* ensuring conformity with regulatory requirements, quality science, accurate interpretation, and consistent delivery in the region
- Provides technical and regulatory advice and promotes compliance to regulated industries, primarily pulp and paper (*Fisheries Act*, PPER, *Canadian Environmental Protection Act* regulations)
- Represents Environment Canada on multi-disciplinary committees (federal, provincial, and local governments, industry, consultants, First Nations, environmental groups or the public) to advise on federal mandates and support common pollution prevention goals
- Provides advice to develop or amend federal legislation, policy and national/regional environmental programs to more effectively address environmental impacts to aquatic environments
- Provides technical advice on potential environmental impacts on proposed Environmental Assessment projects

### ***Senior Biologist, Burrard Inlet Environmental Action Program***

*Fraser Pollution Abatement Office, Environmental Protection Branch, Environment Canada, 224 – West Esplanade, North Vancouver, B.C.*

1992 to 1996:

- Managed and conducted environmental impact and contaminant source projects under the multi-agency Burrard Inlet Environmental Action Program (BIEAP) to direct actions to improve environmental quality of Burrard Inlet
- Represented Environment Canada in multi-stakeholder working groups (municipal/provincial/federal agencies) to coordinate approaches to reduce environmental impacts to the Inlet
- Managed contracts and finances to support Environment Canada's role as banker for BIEAP

### ***Environmental Protection Biologist, Marine Programs***

*Environmental Protection Branch, Environment Canada, 224 – West Esplanade, North Vancouver, B.C.*

1988 to 1992

- Evaluated environmental assessment reports and conducted field surveys in B.C. coastal harbours and ports to monitor trends in environmental impacts from effluent discharges

### ***Biologist***

*ESSA Environmental & Social Systems Anal. Vancouver, B.C.*

1987

- Compiled database of historical sockeye salmon escapement in the Fraser River System for DFO using archived Pacific Salmon Commission records

**Biological Field Officer**    *Pacific Salmon Commission, Vancouver, B.C.*

1987 Summer/Fall (and 1986):

- Conducted daily test fisheries of sockeye (and pink) salmon in the Lower Fraser river and sampled commercial sockeye catches from local canneries for the PSC to regulate fishery openings

**Habitat Biologist**    *Department of Fisheries & Oceans, New Westminster, B.C..*

1987

- Evaluated environmental technical reports and conducted field studies to assess potential environmental impacts from project applications

**Fish Biologist**    *ESL Environmental Sciences Ltd., Vancouver, B.C..*

1986-1987

- Worked on environmental projects to determine potential impacts and/or mitigation and compensation to address fish habitat losses

**Fish Biologist**    *MacLaren Plansearch, Vancouver, B.C..*

1985 (and 1983)

- Monitored native gillnet catches in the Mackenzie River to evaluate initial potential for impacts to fish migrations from offshore oil construction
- Conducted field sampling in the Fraser River Estuary to investigate habitat utilization and food selection in juvenile chum and Chinook salmon comparing natural and manmade habitats

**Fish Biologist**    *IEC BEAK Consultants, Richmond,, B.C.*

1983-1984

- Conducted stream habitat inventory and sport creel census in the Similkameen Basin to assess feasibility to introduce anadromous salmon to compensate for fish habitat losses from dams on the Columbia River.

**Supervisor**    *Department of Fisheries & Oceans, West Vancouver, B.C..*

1983

- Directed four technicians and managed project operating budget in habitat improvement study for juvenile salmonids in the Campbell River estuary.

**Fish Biologist**    *IEC International Environmental Consultants Ltd., Richmond,, B.C.*

1982

- Monitored coho smolt migrations in the Yakoun River System (Haida Gwaii) to assess potential impacts of a proposed mine.

**Biological Technican**    *Aquatic Environments Ltd., Biological Consultants Calgary, AB*

1980-1982

- Performed field and lab duties to collect and process fish, benthic invertebrates, water and sediment samples to assess environmental impacts of proposed development projects.

**Research Assistant**

*University of Western Ontario, London, ON*

1979-1981

- Conducted lab analyses and applied multivariate techniques to interpret environmental data in studies of marine and freshwater benthic invertebrate communities, freshwater phytoplankton and geographic variations in fish species

**ADDITIONAL EDUCATION AND TRAINING**

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2010 October	37 <sup>th</sup> Annual Aquatic Toxicity Workshop, Toronto, ON (periodic attendance of this annual Canadian 4-day workshop to keep current with environmental methods and interpretation of effects in aquatic receiving environments)
2009 June	7 <sup>th</sup> International Conference on Fate and Effects of Pulp & Paper Mill Effluents and 9 <sup>th</sup> IWA Symposium on Forest Industry Wastewaters, Fredericton, NB, 4-day event (also Seattle, WA, June 2003 and Vancouver, BC, June 1996)
2007 December	3-day Summary Statistics course, Simon Fraser University, Vancouver, BC
2006 June	BCIT Pulp and Paper Technology Summer Institute – 5-day, Prince George, BC
2004 June	North American Benthological Society (NABS) Annual Meeting, 5-days, Vancouver, BC
2002 October	Being an Expert Witness. Half day course held at the 29 <sup>th</sup> Annual Aquatic Toxicity Workshop in Whistler, BC
2001-2002	29 <sup>th</sup> Annual Aquatic Toxicity Workshop, Whistler, BC Organizaing Committee member (responsible for sponsorships, tradeshow exhibits, website and registration liason)
1998 June	Leadership for New Challenges, 4-day course, Vancouver, BC
1994 November	Society of Environmental Toxicology and Chemistry, Denver, CO
1994 September	Effective Speeches & Presentations, 2-day course, Vancouver, BC
1993 December	International Symposium: Interactions Sediments and Water, Santa Barbara, CA
1992 June	McLuhan and Davies Excellence in Thinking and Writing, 2-day course, North Vancouver, BC
1990 November	Shoreline Protection Course, 1-day, Burnaby, BC
1988-89	Natural Resources Management Program: Environmental Impact Assessments including mock panel hearings (Winter semester), Simon Fraser University, Burnaby, BC.
1988	Canadian Power and Sail Squadron: Basic Boating and Navigation
1980	SCUBA Diving NAUI Certification

## PUBLICATIONS

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- Courtenay, S.C., K.R. Munkittrick, H.M.C. Dupuis, R.Parker and J. Boyd. 2002. Quantifying Impacts of Pulp Mill Effluent on Fish in Canadian Marine and Estuarine Environments: Problems and Progress. *Water Qual. Res. J. Canada* 37(1): 79-99.
- Burd, B., R. Macdonald and J. Boyd. 2000. Punctuated recovery of sediments and benthic infauna: a 19-year study of tailing deposition in a British Columbia fjord. *Marine Environmental Research* 49: 145-175.
- Yunker, M.B., R.W. Macdonald, D. Goyette, D.W. Paton, B.R. Fowler, D. Sullivan and J. Boyd. 1999. Natural and anthropogenic inputs of hydrocarbon to the Strait of Georgia. *The Science of the Total Environment* 225: 181-209
- BIEAP Environmental Quality Objectives and Monitoring Action Team (EQOAMAT). 1997. Burrard Inlet Point Source Discharge Inventory. Prepared for the Burrard Inlet Environmental Action Program (BIEAP) by Bion Research Inc. and revised by the BIEAP EQOMAT.
- Boyd, J.M., J. Baumann, K. Hutton, S. Bertold and B. Moore. 1998. Sediment Quality in Burrard Inlet using various Chemical and Biological Benchmarks. Prepared for the Burrard Inlet Environmental Action Program (BIEAP) by the BIEAP Environmental Quality Objectives and Monitoring Action Team (EQOMAT).
- Boyd, J.M and D.E. Goyette. 1993. Polycyclic Aromatic Hydrocarbon (PAH) and Dioxin/Furan Concentrations in Vancouver Harbour Sediments – January 1991. Environment Canada, Environmental Protection. Regional Data Report DR91-07. 10 pp. + appendices.
- Green, R.H., J.M. Boyd and J.S. Macdonald. 1993. Relating sets of variables in environmental studies: the Sediment Quality Triad as a paradigm. *Envirometrics* 4(4): 439-457.
- Cross, S.F., J.M. Boyd, P.M. Chapman and R.O. Brinkhurst. 1990. A Multivariate Approach to Assessing the Spatial Extent of Benthic Impacts Established Using the Sediment Quality Triad. Prepared for the Department of Fisheries and Oceans and Environment Canada.
- Goyette, D. and J. Boyd. 1989. Distribution and Environmental Impact of Selected Benthic Contaminants in Vancouver Harbour, BC: 1985 to 1987. Regional Program Report 89-02. 99 pp. + appendix reports.
- Zallen, M.R. and J. M. Boyd. 1986. Investigation of juvenile chinook salmon in the Fraser River mainstem, Floods-Hope area. Prepared by ESL Environmental Sciences Limited for the Ministry of Transportation and Highways, Victoria, BC. 31 pp. + appendices.
- Hickey, D.G., I.W. Whyte, C.M. Movold and J.M. Boyd. 1984. Similkameen River Habitat Inventory for Enloe Dam Passage. Prepared by IEC BEAK consultants Limited for Bonneville Power Administration, Portland, Oregon. 73 pp. + appendices.