

# BORIS FICHOT, P.Eng., P.E., M.Sc.

## EDUCATION

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- Graduate Studies (Civil Engineering), University of British Columbia, Vancouver, BC, Canada, 2000
- M.Sc. (Water Resources Planning and Management - Civil Engineering), Colorado State University, Fort Collins, CO, USA, 1999
- B.Eng. (Civil Engineering and Applied Mechanics), McGill University, Montreal, QC, Canada, 1998

## PROFESSIONAL REGISTRATIONS

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- Professional Engineer, British Columbia, Canada (APEGBC#30575)
- Professional Civil Engineer, Alaska, USA (CE#12405)
- Professional Engineer, Texas, USA (TBPE#93528 expired June 2005)

## PROFESSIONAL AFFILIATIONS

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- American Society of Civil Engineers (ASCE), Member
- Environmental & Water Resources Institute of ASCE (EWRI), Member
- Clean Energy BC, Member through Dragonfly Hydropower Corporation
- Kitimat Chamber of Commerce, Member through Dragonfly Hydropower Corporation
- Canadian Wind Energy Association (CANWEA), Member through Knight Piésold Ltd.

## PROFESSIONAL EXPERIENCE

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*May 2012 – Present*

Dragonfly Hydropower Corporation

**Owner/Director**

North Vancouver, BC

- Identified hydropower opportunities in the Kitimat area of British Columbia, evaluated and modeled the commercial viability of potential facilities, applied for water licenses for three facilities, performed preliminary cost evaluations on said facilities, interfaced with First Nations and initiated hydrological studies.

*September 2012 – Present*

Dragonfly Hydropower Consulting Ltd.

**Principal**

Vancouver, BC

- John Hart Generating Station Replacement Project, Canada – RFP technical submission preparation, as Senior Engineer under subcontract with Knight Piesold Ltd. for the Elk Falls Energy Partners.
- Jamie Creek Project, BC, Canada – Conducted a Due Diligence Study, evaluated construction progress, energy, hydrology, reviewed detailed design and tender.

*February 2006 – April 2012*

Knight Piésold Consulting Ltd.

**Senior Engineer**

Vancouver, BC

- Box Canyon, BC, Canada – As Design Coordinator coordinated and participated in engineering design, optimization, cost estimating, and conducted project management and project design scheduling.
- Muskrat Falls and the Labrador Island Link, NL, Canada – As Expert Reviewer for the Consumer Advocate of Newfoundland and Labrador, reviewed documents prepared by Nalcor and the Public

Utilities Board on Muskrat Falls being the least cost option for the supply of power to Newfoundland and provided independent input to the Consumer Advocate.

- Iqaluit Hydro, Nunavut – Completed a high-level regional study of potential hydroelectric resources to supply the Iqaluit and potential mining developments.
- Hartley Bay Hydroelectric Project, BC, Canada – Conducted a Due Diligence Study on Project Feasibility for INAC. Conducted review of Tender Documents and Bids for the Hartley Bay Band.
- Betmai Hydroelectric Facility, Sierra Leone – Prepared Feasibility Study including facility design layouts, cost estimates, energy estimates, and project overall financial valuation.
- Sechelt FN Territory Study, BC, Canada – Completed a detailed study of the run-of-river potential in the Sechelt FN traditional territory.
- Kwalsa and Upper Stave Project, BC, Canada – As Design Coordinator, coordinated and participated in engineering design, prepared earned value reports, conducted project management and project scheduling, and tracked and reported on progress.
- Homestake Project, BC, Canada – Prepared alternatives assessment for mine power supply alternatives including transmission line alignments, a regional look at all hydropower facility option, and estimated development cost.
- Brucejack Creek, BC, Canada – Prepared Mine PA section pertaining to a hydroelectric supply to the mine, including facility layouts, energy estimates and capital cost.
- Upper Toba Valley Hydroelectric Project, BC, Canada – As Project Coordinator, conducted project management and scheduling, reviewed and coordinated facility layout and design, evaluated project feasibility, prepared Clean Power Call bid material, and participated in project permitting.
- La Joie Project, BC, Canada – identified and analyzed alternatives to remediate Dam Safety deficiencies in a manner that will not preclude future potential plant modernization and power generation expansion opportunities at the La Joie facility.
- Kitsault Project, BC, Canada – Evaluated the mine water management options and integrated a 9 MW hydroelectric project option in the feasibility study.
- Jamie Creek Project, BC, Canada – Conducted a Due Diligence Study, Evaluated energy, hydrology and performed optimization of plant capacity.
- Cascade Creek Hydroelectric Project, AK, USA – Conducted a Due Diligence Study for investors.
- Bute Inlet Project, BC, Canada – Conducted project identification, project optimization, land and water license application submissions, hydrology and energy studies, cost estimations, preliminary project design, and project permitting.
- Pebble, AK, USA – Prepared a Wind Power Screening Assessment for the proposed Pebble Mine. Identified run-of-river hydropower options.
- Meager, Salal, and South Creek, BC, Canada – Responsible for project identification, land and water license application submissions, hydrology and energy studies, preliminary project design, and project permitting.
- Coeur Alaska Inc., Kensington Gold Project, Alaska, USA – Provided onsite construction supervision and sediment control design and consulting services during the construction of this gold mine north of Juneau, AK.
- Prepared BC Hydro tender submissions for the East Toba River and Montrose Creek Project, Canada (a 196 MW run-of-river project), the Rainy River Project, Canada (a 15 MW run-of-river project), the Emory Creek Project, Canada (a 6.5 MW run-of-river project), and the Log and Kookipi Creeks, Canada (a 20 MW run-of-river project).

*March 2001 – June 2004*

Lower Colorado River Authority (LCRA)

**Engineering Associate**

Austin, Texas, USA

- Worked in the Water Resources Planning Department; evaluated and modeled impacts of water resources management plans, conducted analysis of water resources management policy options, and drafted technical reports, memos and grant applications pertaining to management suggestions and options.
- Conducted maintenance and upgrade of water resources planning models, such as water allocation models, water rights models, hydraulic models, stochastic models, environmental models, and optimization tools. Presented the results of analyses in briefings, meetings, and documentation to a variety of internal and external parties.

May 2000 – January 2001

Canadian International Development Agency (CIDA)

**Researcher**

Beijing, China

- Conducted primary and secondary research in China for the Beijing-Tianjin 3x4 Water Resources Management Project. Topics of research included: institutional analysis of Chinese environmental governance and management, assessment of Beijing's hydrological and environmental situation, and policy analysis of Chinese legislation, standards and policies related to water quality management.

1999 – 2000

Dept. of Civil Engineering, University of British Columbia

**Research Assistant**

Vancouver, BC, Canada

- Researched topics in relation to the development of indicators of environmental health particularly for water resources.

## COMPUTER KNOWLEDGE

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- *General* Word, Excel, PowerPoint, MS Project, VBA
- *Languages* Basic, Visual Basic, HTML, SVG, Fortran
- *Concepts* systems analysis, numerical methods, optimization methods, object oriented programming, stochastic systems, fuzzy logic, neural networks, genetic algorithms, operations research, decision support and expert systems
- *Water specific* Riverware, WAM, RESPONSE, HEC-RAS, Coanda, Modsim, CSUDP, Dambreak, SWM, QUAL2E, CETHERM
- *Wind specific* WindPRO, WASP, RETScreen

## TRAINING (Short Courses, Workshops, Seminars and Symposia)

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- Run-of-River Hydropower, British Columbia Institute of Technology (2010, 2011, 2012) (Instructor)
- Clean Energy BC Annual Conference (2008, 2009, 2010, 2011)
- Knight Piésold Renewable Energy Seminar (2008, 2011) (Presenter)
- Optimization of Hydropower Operations Pre-Conference Workshop Waterpower XVI (July 2009)
- Microsoft Project 2003 (March, 2008) by On-Track Computer Training
- WindPRO Training Course (June, 2007) by EAPC
- Cold Regions Engineering Course (November, 2006) by the University of Washington
- Leadership Training Course (June, 2004) by LCRA
- Riverware Training Course (April, 2004) by Cadswes

## PUBLICATIONS AND PRESENTATIONS

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- Brown R., Fichot B., and Kabir N., "Accounting on the Lower Colorado", RiverWare User Group Meeting 2004, February 2004
- Brown R., Fichot B., Kabir N., "Innovations in LCRA's Water Supply Modeling", Texas Section - ASCE Spring 2005, April 2005, Austin, Texas.
- Fichot, B., "Finding Indicators to Evaluate Beijing-Tianjin Wastewater Discharge Policies", CIDA and Center for Human Settlement, 2000. <http://www.chs.ubc.ca/china/index.html>
- Fichot B. and Hou E., "Beijing-Tianjin Watershed Report Card", CIDA and Center for Human Settlement, 2000. <http://www.chs.ubc.ca/china/index.html>
- Fichot B., "Deriving an Inflow and Outflow Fuzzy Rule Base System", M.Sc. Technical Paper, August 1999.

## REFERENCES AVAILABLE UPON REQUEST