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Cory Albers, P. Eng., M. Sc.

Hydraulic Systems Engineer
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PROFESSIONAL SUMMARY

Mr. Albers has more than a decade of experience in a wide variety of water resources engineering projects. He provides clients with technical depth in the analysis and modelling of fluid flow systems while considering how these systems can interact with larger physical and ecological environments. By coupling his strong technical skills with an equally strong interest in larger systems interactions, Cory works very effectively with biologists, landscape architects, provincial and federal regulatory agencies, construction contractors and both private and public sector clients.

EDUCATION

- B.Sc. in Civil Engineering (Distinction), University of Alberta, Edmonton, Alberta, 1994
- M.Sc. in Civil & Environmental Engineering, University of Alberta, Edmonton, Alberta, 1997

EMPLOYMENT HISTORY

- 2013 – Present Co-Owner, Source2Source Inc., Calgary, Alberta
- 2008 – 2013 President, Fluid Forms Inc., Calgary, Alberta
- 2007 – 2008 AMEC Earth and Environmental, Calgary, Alberta
- 2002 – 2007 Water Resources Engineer, Stantec, Calgary, Alberta

PROFESSIONAL FOCUS

A particular focus of Cory's work is in the area of "Forensic Hydraulics" which involves the investigation and revelation of root causes behind why hydraulic systems fail to function as their designers intended. This area of practice is so highly skilled that it requires a practitioner to generally disregard textbook analyses in favour of investigating system behaviour from fundamental first principles. Cory's expertise has resulted in him becoming the lead hydraulic analyst on some of the highest profile water and wastewater treatment projects in Calgary and Vancouver either from the initial conceptual design or in designing performance enhancing system retrofits.

On many projects, Mr. Albers' most valuable role emerges from his capabilities as a creative force in interdisciplinary teams. He has repeatedly seen opportunities for designs that engage interdisciplinary integration in unforeseen ways. In the past 5 years, his creative partnership with Bernie Amell (Source2Source Inc. Co-Owner) has generated several innovations that are precedent setting stormwater treatment system technologies. Cory actively publishes his work and has authored or coauthored three peer reviewed publications and 11 conference and trade journal publications.



In the more traditional practice area of hydraulic engineering, Cory has been the lead functional designer of major hydraulic structure projects including stormwater management and several water and wastewater treatment facilities. Cory has also served as the lead hydraulic engineer on large and small river modelling and analysis projects where the project objectives may range from designing river bank erosion protection works to assessing the in-stream flow needs for fish.

SELECTED PROJECT EXPERIENCE

East Bowmont Stormwater Retrofit Project Preliminary Design, 2013: Responsible for hydraulic system design for a large end-of-pipe stormwater treatment facility in east Calgary including the functional design for a Nautilus Pond™ and all hydraulic control structures. The hydraulic control structure design was particularly challenging since it was a requirement that the hydraulic control structures convey public art themes that were functional and educational rather than simply being external cosmetic art. The result was that all hydraulic control structures had to be designed from first principles without any functional precedent.

Hydraulic Specialist for the Seymour Capilano Filtration Plant, 2009 - present: Hydraulic specialist responsible for conducting numerous hydraulic analyses for the 2250 ML/D plant providing potable water for one million Metropolitan Vancouver residents.

Hydraulic Specialist for the Bonnybrook WWTP Headworks Upgrade, 2010 - present: Hydraulic specialist responsible for the hydraulic design and analyses of the 1390 ML/D upgrade to the Bonnybrook WWTP Headworks in Calgary, Alberta.

Athabasca River Delta Segment 1 Hydrometric Survey and Fish Habitat Modelling, 2009: Project manager and technical lead for hydrometric survey and weighted useable area fish habitat modelling project at 4 sites within the Athabasca River Delta.

Nautilus Pond™ Development and Analysis, 2008 - present: Conducted proof of concept computational fluid dynamics simulations for stormwater grit removal and clarifier design concept leveraging technologies utilized in wastewater treatment plant designs. Wrote and developed all patent application materials. US Patent #8,333,895 was awarded in 2012.

Computational Modeling of Marshall Springs Stormwater Pond, City of Calgary, Alberta, 2007: Executed a 2D finite element computational modeling study of the flow and sediment removal performance of a stormwater pond.

Computational Modeling of Kennedale Stormwater Wetland, City of Edmonton, Alberta, 2007: Executed a 2D finite element computational modeling study of the flow and age of water in support of designing a constructed wetland retrofit to an existing pond.