

# WIM M. VELDMAN *M.Sc., FEIC, P.Eng.*

## *International Hydrotechnical Consultant*



### **Overview**

Wim Veldman has more than 50 years of experience in major **pipeline, mining and infrastructure** projects in Canada, the USA and overseas. His experience was highlighted by 7 years in the design of flood control and hydroelectric stations in Manitoba, 3 years as the full time senior consultant on the design and construction of the river crossings for the \$8 billion trans Alaska oil pipeline, and 40 years as an independent international consultant ([www.wimveldman.com](http://www.wimveldman.com)).

Wim's scope of work includes planning, serving as an expert witness, organizing public input and meetings, detailed design, project management, field engineering, construction supervision and operational monitoring. Long term relationships with a number of major companies in Canada and the US, such as the trans Alaska oil pipeline for 45 years, attest to the trust and value clients place on his input.

Internationally, Wim has consulted on projects in Indonesia, Sri Lanka, Mongolia, Tanzania, Ethiopia, China, Yemen, Chile, Argentina, Ecuador, Peru and Bolivia. His senior role in the design and construction of five major pipelines across the towering Andes in South America over a 10 year period is a testament to his marketing strategy – word of mouth.

### **Public Recognition**

Wim's achievements, particularly in "extreme engineering," have been recognized via multiple provincial and national awards and showcased in trade magazines. In April 2019 he was invited to testify to Senate Committees in Ottawa re two critical bills affecting oil and gas development and pipelines.

### **Feedback**

- "You did an outstanding job in providing the hydrologic studies for Atigun. I definitely like your style in making presentations to the regulatory agencies. You have created a tremendous amount of credibility for us with them."*

Alyeska Pipeline Service Company, Alaska  
8 mile long replacement
- "Without your skills in engineering the diversions and containment dykes, dealing with the regulatory agencies on such matters and directing the actual work processes on these activities, we would have floundered"*

Shell Canada Limited  
Pipeline break
- "You have been selected as a well qualified expert with the necessary independence and integrity to carry out an assignment on behalf of both parties."*

City of Calgary/Lafarge Canada  
Bridge Impacts/Floodplain Studies
- "Your professional calm and ability to deal with our difficult negotiations was critical over the past year."*

Athabasca Chipewyan First Nation versus BC Hydro
- "You did a great job communicating just the right amount of technical information to a mixed audience" and "your tone set the stage for respectful conversation."*

Confidential Independent Review  
Proposed Flood Protection Works



Pipeline Repair  
Red Deer River



Camisea Pipeline  
Peru

## INFRASTRUCTURE



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Wim's experience with infrastructure projects - bridges, water intakes, bank protection and floodplain developments - ranges from planning to detailed design, to regulatory approvals to field engineering to operational monitoring. He has extensive experience in developing instream construction methodologies and in obtaining regulatory approvals. With respect to river intakes, Wim is experienced in the construction of practical and economic repairs to existing structures.

Wim's philosophy in approaching challenging situations is best described by "it is easy to obtain approval but more challenging to obtain practical approval conditions." He is a strong believer in specifying sound and overriding principles for instream work while enabling innovative and cost-effective solutions by the Contractor.

## DETAILS

Examples of high profile and challenging assignments are:

- **bridges** – hydrotechnical design, development of instream construction plans, regulatory approvals and field engineering for more than a dozen major bridges.
- **bridges** - multi-year surveys and evaluations of scour at the Bow River crossings in Calgary. Design of remedial works.
- Saint John River **bridges**, New Brunswick - evaluation of the impact of hydroelectric dams on spring breakup which resulted in the failure of three long railway bridges.
- **bank protection** - evaluation of the failure of recently constructed bank armouring, key to protecting a school and senior residences, on the Mendenhall River in Alaska. Also evaluated construction costs of replacement works.
- **floodplain development** - for the massive multi-year redevelopments of East Village and Quarry Park in Calgary, established the appropriate fill grade and bank protection which withstood the record 2013 flood with no damage nor overtopping.
- **floodway delineation** - for Quarry Park in Calgary, was engaged jointly by competing interests to review and refine the floodway delineation. Both parties committed to accepting Wim's assessment.
- **impact of hydroelectric dam** - advised and technically represented, over a number of years, the Athabasca Chipewyan First Nations, re the impact of the Bennett Dam on waterlevels in the Athabasca River delta.
- **Winnipeg Floodway** - provided independent review and senior input during Hearings to the Board reviewing the proposed expansion of the floodway following the record 1997 flood.
- **Flood Protection** – confidential independent review of impact of proposed major works on adjacent properties.

## CLIENTS

- Alaska Dept. of Highways
- Alberta Transportation and Utilities
- Calgary Municipal Land Corp.
- City of Calgary
- City of Edmonton
- City of Fort McMurray
- City of Medicine Hat
- CN Rail
- Cottonwood Golf Course
- CP Rail
- Elkview Coal
- Glencoe Golf Course
- Lafarge Canada
- Radium Hot Springs
- Remington Development Corporation
- Shell/BHP
- University of Calgary



Courtesy Mike Russo



Courtesy Mike Russo

### SCOPE

- DESIGN
- APPROVALS
- CONSTRUCTION
- OPERATIONAL MONITORING

### SPECIAL SERVICES

- FAILURE REVIEWS
- INSURANCE CLAIM REVIEWS



WIM M. VELDMAN  
Consulting Inc.

## BESIDES WORK

In 1945, the Canadian-led allies liberated my birth country, the Netherlands. I was born in early 1944. More than 7,600 Canadians lost their lives. As a result of their valour and sacrifice, the suffering of the Dutch especially during the "Hunger Winter" of 1944/1945, was greatly shortened and alleviated. My parents' concern for my health, especially after having lost a 6 month old son in 1940, was obvious from my Dad's hand-drawn medical chart.



Combining my passion (and nominal talent) for long distance road biking with my deep appreciation for the Canadian veterans, I rode Lake Louise to Whistler, in 2015. By the numbers:

- 7 days, 1,000 km
- total climb of 36,000 feet
- \$16,000 raised for the Calgary Veterans Food Bank

Since that ride, I have annually purchased children bikes for families supported by the Calgary Military Family Resource Centre.

## CONTACT

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## THE BORING DETAILS

### EDUCATION

- B. Sc., Civil Engineering, 1966, University of Manitoba
- M. Sc., Water Resources, 1969, University of Manitoba

### MEMBERSHIPS

- Professional Engineer, Alberta, British Columbia, and Northwest Territories
- American Society of Civil Engineers (since 1968)

### ASSOCIATION RESPONSIBILITIES

- APEGA - Councillor (2004 - 2007)
- University of Calgary - Civil Engineering Advisory Council (2002 - 2004)
- Board of Directors, Consulting Engineers of Alberta (1985 - 1987)
- Chairman, 8th Annual Western Regional Conference, EIC (1982)
- Calgary Chairman, Engineering Institute of Canada (1980 -1981)
- Calgary Chairman, Canadian Society for Civil Engineering (1977 - 1979)

### AWARDS

- In 1984 Wim Veldman was awarded a Fellow in the Engineering Institute of Canada (F.E.I.C.) for "excellence in engineering and services rendered to his profession and to society".
- Multiple awards of "excellence" and "merit" from the Consulting Engineers of Alberta and the Association of Consulting Engineers of Canada for innovative solutions for challenging pipeline projects in Argentina and Ecuador.

### PROFESSIONAL HISTORY

• Wim M. Veldman Consulting Inc.	Hydrotechnical Consultant	2012 - Present
• Matrix Solutions Inc.	Vice President	2005 to 2012**
• Hydroconsult	President	1992 to 2005
• Hardy BBT Ltd	Manager	1987 to 1992*
• Hydrocon Engineering	President	1979 to 1987
• Northwest Hydraulic Consultants	Principal	1973 to 1979
• Manitoba Hydro / Crippen Acres /Province of Manitoba	Hydraulic Engineer	1966 to 1973

\* Hardy purchased Hydrocon in 1987

\*\* Matrix purchased Hydroconsult in 2005

### PUBLICATIONS AND MAJOR PRESENTATIONS

- Wim M. Veldman, "*Blowing in the Wind – Tales from an Immigrant Kid to International Consultant.*" Personal memoirs, self published. 155 pp. June 2020.
- W. M. Veldman, "*Trenched and Elevated Pipeline River Crossings.*" Author, Chapter 5 of "*Pipeline Geohazards, Planning Design, Construction and Operations,*" Edited by M. Rizkalla and R. Read, American Society of Mechanical Engineers, 2019.
- W. M. Veldman, "*Flood Mitigation, 2013 Alberta Flood.*" Invited Panel Member, 2014. Canadian Society of Civil Engineers.
- W. M. Veldman, "*River Crossings – What Have We Learned in 40 Years.*" Invited speaker, Alaska Department of Environmental Conservation, 2013 Arctic/Cold Regions Oil Pipeline Conference, Anchorage, Alaska, 2013.
- W. M. Veldman, "*Guide to Bridge Hydraulics.*" Transportation Association of Canada. Steering and Review Committee, 2004.
- W. M. Veldman and J. Ferrell, "*Lessons Learned for River Crossing Designs from Four Major Floods Experienced Along the Trans Alaska Pipeline.*" ASCE, Cold Regions Engineering, Anchorage, Alaska, May 2002.
- W. M. Veldman and P. McDevitt, "*A 13 km River Training Structure for the Trans Alaska Oil Pipeline.*" Offshore Mechanics and Arctic Engineering Conference, American Society of Mechanical Engineers Conference, Calgary, Alberta, 1992.



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