

# 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

## GENERAL



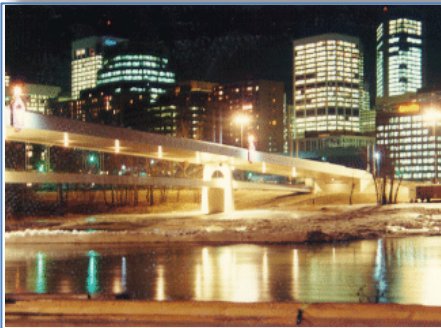
## PIPELINES

Since 1973 - 1977 when he was the senior hydrologic consultant to Alyeska Pipeline Service Company for the design and construction of the \$8 billion, 800 mile oil pipeline in Alaska, Wim has been involved in numerous major pipeline projects. He continues as a senior consultant to Alyeska and this long term hands-on experience has been the foundation for his pipeline experience. Wim's experience ranges from routing a pipeline in Tanzania to the design / permitting of numerous crossings in Western Canada to field supervision and permitting for a major repair of a sour gas pipeline break in the Red Deer River. He is presently involved in the design and field engineering of major pipeline projects in Canada and the U.S. (also see "Publications and Major Presentations")

- AEC Oil and Gas (EnCana)
- Alyeska Pipeline, Alaska
- ARCO Alaska
- ATCO
- BC Gas
- BP Exploration Alaska
- Canadian Energy Pipeline Association
- Chancellor Energy
- ConocoPhillips
- Enbridge (Canada, U.S., Bolivia)
- Esso Resources (Imperial Oil)
- Exxon
- Fluor Daniel
- Foothills (Yukon)
- Fortis BC Woodfibre
- GasAtacama, Argentina
- GasPacífico, Chile
- Gulf Canada
- Inter Pipeline
- Imperial Oil
- Kinder Morgan (Canada)
- Michael Baker Jr., Alaska
- Northrock
- Northwest Pipeline
- Pacific Trail Pipeline
- PacRim
- Penn West
- Shell Canada
- Summit Resources
- Tanzania Petroleum
- TECHINT (Argentina, Ecuador and Peru)
- Trans Canada
- Yukon Pacific



48 inch Trans-Alaska Oil Pipeline



Northwest Light Rail Transit Bridge  
Bow River, Calgary



Irrigation Project  
Awash River Basin, Ethiopia

## INFRASTRUCTURE

Wim's experience with infrastructure projects (bridges, culverts, roads, surface water intakes, bank protection and floodplain developments) ranges from planning to detailed design to field inspections to monitoring. He has extensive experience in developing instream construction guidelines and in regulatory approvals. With respect to river intakes, Wim is experienced in the construction of practical and economic repairs to existing structures.

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

## WATER RESOURCES

Wim's water resources experience ranges from reviewing the design of irrigation projects in Ethiopia and Indonesia, to helping develop a watershed rehabilitation program in Sri Lanka to being the project manager for watershed planning studies and the design/ construction of small dams in Alberta. For the Tarim basin in western China, he advised CIDA on a multi-year program for water resources management. He was a senior hydraulic design engineer for the Kettle and Jenpeg hydro projects in Manitoba. He has also been responsible for the design and construction of a 100 boat marina in British Columbia. In 2005 Wim provided advice to the Board during the Hearings re the proposed expansion of the Winnipeg Floodway, post the record 1997 Red River flood."

- Alberta Environment
- Alberta Fish and Wildlife
- Canadian International Development Agency
- City of Wetaskiwin
- County of Bighorn
- County of Stettler
- Foothills Model Forest
- Manitoba Floodway Review Board
- Northwest Territorial Government
- Peigan Indian Reserve
- Shell Canada
- Shell/ACFN
- Simpson Ranching
- Windermere Lake Marina



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## MINING

Wim has been extensively involved in the planning, EIA, design and construction components of water management schemes at major oilsands and open pit projects in western and northern Canada. This experience ranges from acting as the senior hydrologic advisor to Esso's OSLO oilsands project for 3 years to preparing an EIA for Cardinal River Coals' proposed Cheviot mine to detailed designs and field inspections for a major channel diversion and spillways for the Curragh mine at Faro, Y.T. Following the massive June 1995 flood, he designed extensive instream repairs for the Elkview Coal mine in B.C.

- Alberta Environment Protection
- Alsands
- Burnco
- Cardinal River Coal
- Curragh Resources
- Dept. of Fisheries and Oceans
- Elco Mining
- Elkview Coal
- Esso Byron Creek
- Gregg River
- Lafarge Canada
- Luscar Ltd. - Coal Valley
- OSLO
- Sandalta
- Smoky River Coals Ltd.
- Solv - Ex
- Suncor
- Syncrude



Cheviot Mine/Cardinal River Coal  
Alberta

## ENVIRONMENTAL

Wim has extensive experience as a member of multi - discipline teams for environmental audits (pipelines and oil and gas fields) and in providing hydrologic input to the design of fisheries enhancement and compensation measures. This combined with his experience in the preparation of EIAs and presenting results at public meetings and hearings, provides Wim with a broad technical and environmental background essential for projects subject to regulatory and environmental approval.

- Alberta Fish and Wildlife (fish enhancement)
- BC Gas (pipeline)
- Bovar
- Cardinal River Coals (Cheviot Mine)
- Golder (various)
- Imperial Oil Ltd. (oil development)
- Laidlaw Environmental (waste storage)
- Luscar Ltd. (Coal Valley Mine)
- OSLO (oilsands)
- PetroCanada (oilsands)
- Sandalta (oilsands)
- Shell Canada
- Solv - Ex
- Trans Alaska Pipeline System (ROW renewal)
- Trans Canada Pipeline (Nova)



Fisheries Enhancement Project  
British Columbia

## HEARINGS/FAILURE REVIEW

The ability to deal with the general public, regulatory agencies and in judicial settings has been a strength of Wim for his entire career. He has organized and chaired public meetings and served as an expert witness in hearings on billion dollar projects in both Canada and the U.S. He prides himself in being able to present complex issues in an easy - to - understand manner.

- Athabasca Chipewyan First Nation<sup>4</sup>
- Alyeska Pipeline<sup>1</sup>
- BP Exploration Alaska<sup>2</sup>
- Cardinal River Coals<sup>1</sup>
- City of Red Deer<sup>1</sup>
- County of Snohomish (Washington)<sup>1</sup>
- County of Stettler<sup>2</sup>
- CP Rail<sup>3</sup>
- Epcor<sup>3</sup>
- Imperial Oil Ltd.<sup>1</sup>
- Laidlaw Environmental<sup>2</sup>
- London, Ontario<sup>3</sup>
- Manitoba Floodway Authority<sup>1</sup>
- Mannix Family<sup>1</sup>
- McLennan Ross<sup>3</sup>
- PetroCanada<sup>1</sup>
- OSLO<sup>2</sup>
- Shell Canada<sup>1</sup>
- Simpson Ranching<sup>2</sup>
- State of Alaska<sup>3</sup>

1 Regulatory / Judicial Hearing

2 Major Public Meetings

3 Expert Review of Failure Leading to Mediation

4 Negotiations re: Impacts / Damages

4 Negotiations re: Impacts / Damages



Mendenhall River Revetment  
Alaska



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## 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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