Jason McDiarmid, R.E.T. Terra Erosion Control Ltd. RESUME

Career History

Terra Erosion Control Ltd.
Nelson, British Columbia
Project Manager
November 2009 to Present

Stantec Consulting Ltd.
Edmonton Alberta
Environmental Consultant / Project Manager
May 2003 to October 2009

- project management
- contract administration
- reports, studies and tender documents
- raw, fire and potable water lines
- sanitary sewers
- pump stations
- lift stations
- forcemains
- storm water management facilities
- storage facilities
- culverts
- water treatment
- wastewater treatment
- operations manuals
- public and stakeholder consultation
- erosion and sedimentation control
- outfalls rehabilitation
- proposal preparation
- scada and real time control
- civil site works and grading
- horizontal directional drilling
- regulatory application and compliance
- water system & thermal modeling
- pressure pipeline and pump station modeling
- small gravity sewer system modeling

My career with Stantec's Environmental Infrastructure group has provided me with the opportunity to work on an extensive range of environmental infrastructure and civil projects. Including study, design and construction management of linear infrastructure, pump stations, lift stations, storm water management facilities, control systems and civil surface works.

A sample set of projects is provided at the end of this resume.

The City of Whitehorse
Whitehorse Yukon
Utilities Supervisor
August 1998 to May 2003

- staff supervision & recruitment
- pump stations
- lift stations
- water treatment
- storage facilities
- water lines
- water metering program
- sanitary sewers
- storm sewers
- sewage treatment lagoons
- scada and control systems
- solid waste collection
- landfill operation
- operational and capital budgets
- preventative maintenance programs
- subdivision design reviews
- design and construction standards
- safety programs
- transportation and parks technical support
- parts & materials procurement and inventory

As the Utilities Supervisor for the City of Whitehorse`s Public Works Department, I was responsible for the overall operations and maintenance of the City`s water and wastewater systems. I directly supervised up to 24 union members including recruitment, evaluation and career development. During my time as the Utilities Supervisor we developed or formalized a number of preventive maintenance programs including water testing, unidirectional flushing, hydrant winterization, valve exercising, sewer cleaning, reservoir cleaning, leak detection and upgraded our major pump stations to SCADA.
We also managed to fix a significant amount of neglected infrastructure while dealing with shrinking budgets.

Engineering Technologist — October 1994 to August 1998

- budgeting and planning
- report preparation
- surveying
- water lines
- sewer lines
- storm sewer lines
- storm water ponds
- sewage lagoons
- roadways
- construction management
- water modeling
- landfill
- pavement systems

As an Engineering Technologist for the City of Whitehorse, I was involved in planning, budgeting, study, design and construction of transportation, solid waste, water and wastewater capital projects.

Public Works & Government Services Canada

Construction Inspector Edmonton Alberta — June 1993 to October 1994

- project management
- highway design
- construction monitoring
- highway construction inspection
- gravel crush inspection
- pavement construction
- materials testing
- surveying
- drainage structure installation inspection
- asphalt recycling and overlay

As a Construction Inspector for Public Works & Government Services Canada I worked under the Alaska Highway Program on highway design and construction.

Materials Technician Whitehorse Yukon — Seasonal 1989 to 1992

- soils, granular materials testing
- concrete & asphalt testing
- geotechnical field investigation
- gravel crushing
- highway reconstruction inspection
- drainage structure inspection
- survey assistant

As a Materials Technician for Public Works & Government Services Canada, I conducted in lab and field materials testing, gravel crush inspection, and highway construction inspection for the Alaska Highway Program.

Education

British Columbia Institute of Technology	Burnaby British Columbia
Civil and Structural Engineering Technology	Diploma, 1991 to 1993
University of British Columbia	Vancouver British Columbia
Applied Science	First year, 1990 to 1991
Yukon College	Whitehorse Yukon
Science (First Year University Transfer)	1989 to 1990
F.H. Collins Secondary School	Whitehorse Yukon
Grade 12 Diploma	1986 to 1989

Training

Emergency Operations

o Emergency Site Management	Canadian Emergency Preparedness College 2001
o Emergency Operations Center	Canadian Emergency Preparedness College 2000

Safety

o H2S Alive	Suncor, 2009
o WHMIS	Stantec Consulting Ltd. 2008
o Standard First Aid and Heart Saver II	Canadian College of EMS 2007
o Alberta Construction Safety	Alberta Construction Safety Association 2007
o Oils Sands Safety	Stantec 2007
o Transportation of Dangerous Goods	Stantec Consulting Ltd. 2003
o Confined Space Entry and Rescue	Justice Institute of British Columbia 2001

Technical

o Autodesk Land / Civil Fundamentals	Rand Worldwide 2004
o Water Treatment Level 1	BC Water and Wastewater Association 2002
o Cross Connection Control Tester	BC Water and Wastewater Association 2001
o SLC500 & RSLOGIX500 (PLC)	Rockwell Automation 2000
o Wonderware Automation (SCADA)	Flint Controls and Electric 2000
o Water Distribution Level 1	BC Water and Wastewater Association 2000

Supervisory

o Supervisor's Skills Level 1 & 2	Yukon College 2001
o Media Relations	Yukon College 2000
o Supervisor's Safety Skills Level 1	Yukon College 1999

Stantec Project Management Training 2005 to 2007

- Introduction to Project Management
- Manage Risk: Delivery Quality Cash
- Risk Management
- Project Planning
- Projects, Profit Centres and Cash Flow
- Mitigate Risk: Projects and Agreements
- Project Management Framework
- People Skills
- Business Development
- Client Relations

Current Certificates and Licenses

o Registered Engineering Technologist	Association of Science and Engineering Technology (ASET) Alberta 2008
o Certified Engineering Technologist	ASET 2005
o Class 5 driver's license	Government of Alberta
o Standard First Aid and Heart Saver II	Canadian College of EMS 2007

Past Certificates and Licenses

o Notary Public in and for the Yukon	Expired 2007
o Applied Science Technologist (AScT)	Applied Science Technologists and Technicians of B.C., Transferred in 2005
o Cross Connection Control Tester Certification	BC Water and Wastewater Association 2001
o Chlorine Handler's Certification	BC Water and Wastewater Association 1996

Stantec Project Highlights

Rossdale Forcemain Lowering, City of Edmonton

The Rossdale Forcemain Lowering project consists of providing a design, regulatory support services and construction support services to lower an exposed sanitary sewer forcemain on the bank of the North Saskatchewan River.

For this project I provided project management and design services. This project is currently in the regulatory application phase.

Borealis Wastewater Treatment Plant, Suncor

The Borealis Wastewater Treatment Plant Expansion project consisted of upgrading the existing wastewater treatment plant by adding new bioreactor skids, digester skid, clarifier & micro-strainer skid, flow equalization skid, controls and generator skid, pumping station, lift station, storage tank, and new forcemains between the expanded plant and three nearby plants.

For this project I provided construction administration for civil works. The project is currently in the construction stage.

Firebag Administration Complex, Suncor

The Firebag Administration Complex is a design build manage project in which Stantec is providing design and construction monitoring for an oil sands administration complex including administration, control, warehouse and maintenance buildings.

For this project I worked on the design and construction monitoring of potable water lines, fire water lines, sanitary sewer lines, potable water booster station, potable water storage tank, and two pre-packaged sanitary lift stations. The project is currently in the construction stage.

Firebag Village, Suncor

The Firebag Village is a design build manage project in which Stantec is providing the design and construction monitoring services for an oil sands camp including accommodations for four thousand people and Core facilities building.

For this project I worked on the design and construction monitoring of raw water lines, potable water lines, fire water lines, fire water booster station, fire storage tanks, sanitary sewers, sanitary lift station, storm sewers, storm water management pond, storm lift stations, erosion and sedimentation control, site grading, roadways and parking lots. The project is currently in the construction stage.

Elsinore Pump Station Upgrades, Canterra Developments Corp.

The upgrade of the City of Edmonton's Elsinore Pump Station was required to support service area expansion. This project involved a pump station preliminary design study to establish sanitary design flows and servicing options. The detailed design for pump, standby power and control upgrades is currently underway. For this project I provided project management, report preparation and process design.

This project is currently in the detailed design stage.

Storm Water Management Facility Real Time Control Chambers, Private Developers

Real Time Control (RTC) chambers are used to control the timing and outflow rate from storm water management facilities. I provided project management and design services for four RTC chambers for private developers in Edmonton. The RTC facilities are connected to the City's SCADA system.

SCADA Phase V, City of Edmonton

The SCADA Phase V project involved the design, tender and construction services for the fifth phase of the City of Edmonton's SCADA implementation. For this project I provided tender preparation and construction support services.

Storm Outfalls Rehabilitation, City of Edmonton

The preliminary work for this project involved the structural, geotechnical and hydrological assessment of seven storm water outfalls to the North Saskatchewan River and other fish bearing streams. Along with condition assessments, the study documentation included conceptual upgrade designs and an implementation plan.

For this project I provided technical support and assisted with document preparation during the preliminary project stage. I was the Project Manager for the detailed design and rehabilitation of four of the outfalls. A key feature of the outfall upgrade designs includes biotechnical treatment of the erosion control measures. The rational for this approach is to provide improved erosion protection and an improved fish habitat that negates the need for regulator required habitat alteration compensation.

Warm Water Wells Expansion Hydraulic Review and Conceptual Design, City of Whitehorse

Based on recommendations provided in the Water and Sewer Study, Stantec 2003, the City decided to investigate the potential for warm water well expansion as an alternative to constructing a water treatment plant.

For this project I provided project management and project delivery including, water system hydraulic modeling, water thermal modeling, assessment of alternatives, well site and transmission concept design and report preparation.

Pump Station Electrical & Control Design Guidelines Revision, City of Edmonton

This project involved updating the City of Edmonton's Pump Station Electrical and Control Design Guidelines. For this project I provided project management and document preparation.

Rat Creek Fish Habitat Creation, City of Edmonton

The Rat Creek Fish Habitat Creation project involved construction of Sturgeon habitat in the North Saskatchewan River as compensation for other outfall construction and rehabilitation activities. I was responsible for the design and tender phases of this project.

Yellowhead Trail and CN Rail Yard HDD Crossing, EPCOR Transmission Services

The Yellowhead Trail and CN Rail Yard HDD Crossing project involved design and construction services for a high voltage transmission line crossing of the Yellowhead Trail and CN Rail Yard by horizontal directional drilling (HDD). For this project I provided resident engineering services.

Storm Outfall 44 Rehabilitation, City of Edmonton

The Storm Outfall 44 Rehabilitation project consisted of rehabilitation of a 3,000 mm diameter storm outfall, including sheet piles, new concrete apron, and Class 2 rip rap erosion protection. A key feature of this project was construction of nearly a 1 km of access road within the North Saskatchewan River from Class 2 rip rap. Floating turbidity curtains were used to control sediment. The rip rap was later blended into the bank for erosion protection.

I provided resident engineering services for this project.

Opportunistic Sewer Separation, City of Edmonton

The Opportunistic Sewer Separation project involved design and construction services for three combined sewer separation projects. Trenchless construction was required for a significant portion of the design. For this project I provided preliminary report preparation and assisted with sewer line detailed designs.

Lendrum Dry Pond, City of Edmonton

The Lendrum Dry Pond project was initiated after severe July 2004 storm events that caused significant flooding throughout Edmonton. The project involved design and construction services for a storm water management dry pond within an existing school playing field. The dry pond was designed to provide storm water storage and neighbourhood flood relief during large storm events. The design included improved playing fields, naturalized and specialty areas.

For this project I was involved in the preliminary design and public consolation process.

Malmo Relief Sewer, City of Edmonton

The Malmo Relief Sewer project was initiated after severe July 2004 storm events that caused significant flooding throughout Edmonton. The project involved design and construction services for a sanitary relief sewer running through the Malmo Plains neighbourhood. Trenchless construction was required for a significant portion of the design. For this project I was involved in the preliminary design, detailed design and public consolation process.

St. Albert Pump Station Feasibility Study, Alberta Capital Region Wastewater Commission

The St. Albert Pump Station services the entire City of St. Albert. This project involved establishment of sanitary design flows, an assessment of pump station and force main upgrade options, and an assessment of storage options.

For this project I provided pump and forcemain modeling, and assisted with system assessment, upgrades options assessment and report preparation.

Water and Wastewater Facilities Operations Manuals, City of St. Albert

The City of St. Albert was required to produce operation manuals as part of their approval to operate from Alberta Environment. I authored the manuals for this project.

Water Treatment Facility and Wastewater Treatment Facility Operations Manuals, Aquatera Utilities Inc.

Aquatera was required to produce operation manuals as part of their approval to operate Grande Prairie's water and wastewater treatment plants. I co-authored the manuals for this project.

Raw Water Pump Station and Transmission Feasibility Study, Aquatera Utilities Inc.

The Aquatera Raw Water Pump Station services the City of Grande Prairie and region. The pump station delivers water from the Wapiti River to the water treatment plant in Grande Prairie.

This project involved establishment of design water demands, an assessment of pump station and transmission upgrade options, raw water storage options, assessment of severe river erosion conditions and intake protection measures.

For this project, I provided system modeling, and assisted with assessment, upgrades options assessment and report preparation.

34 Street Sewershed Concept Study, Strathcona County

This project involved the establishment of sanitary service levels and collection system upgrade options for a large industrial area within Sturgeon County. For this project I provided, existing system assessment, upgrades options assessment and report preparation.

34 Street Gravity Forcemain and Flush Facility, Strathcona County

This project involved design and tender of a gravity forcemain (inverted siphon) and flush facility to be installed by horizontal directional drill (HDD). For this project I provided forcemain and flush facility design and preparation of tender documents.

Environmental Data Warehouse Evaluation, City of Edmonton

The Environmental Data Warehouse Evaluation project involved an assessment of communications, data storage, data management and reporting options for the City of Edmonton's data logger based environmental monitoring system. For this project I provided option identification, assessment and report preparation.

Whitehorse Water and Sewer Study, City of Whitehorse

The Whitehorse Water and Sewer Study project involved establishment of potential water and sewer service levels and establishment of upgrade requirements to ultimately support the full build out of Whitehorse's planned urban areas.

My involvement included sewer system hydraulic modeling, water system hydraulic modeling, water system thermal modeling, assessment of transmission, storage and pump station upgrade requirements, review of water treatment requirements, and report preparation.

As a follow up to this project, a Water and Thermal Model User's Manual was provided.