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**FUNDY Engineering**

*Serving Our Clients' Needs First*

# 2022

# Statement of Qualifications

Bio-Resources | Building Systems | Environmental | Geotechnical & Surveying | Project Management

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# Corporate History

# Contents

Gordon Mouland, *M.Eng., P.Eng.*, a geotechnical engineer, and Peter McKelvey, *P.Eng.*, a bio-resources engineer, are individually unique; however, early in their careers, the two collectively shared a goal to organically grow a successful engineering-consulting company. In 1989, Gordon and Peter hung out the shingle for **Fundy Engineering** & Consulting Ltd. in Saint John, New Brunswick. At that time, the city was awash with established engineering firms, but the two firmly believed that their vision of *Serving Our Clients' Needs First* with a multi-disciplinary engineering firm would propel them forward. As perseverant ship captains, they navigated their way through several recessions, constantly changing horizons, and many technological innovations.



Gordon Mouland and Peter McKelvey were Ernst & Young Entrepreneur Of The Year® 2011 Atlantic finalists for their tireless and selfless efforts within their workplace and community

Our founders set a course to be employee-owned and operated and they have stayed true. Although most of the locally competitive small and medium-sized engineering-consulting companies have been acquired by national and international conglomerates, the sails of Fundy Engineering's future look full. Our competitive edge, which involves providing top-quality solutions tailored to individual clients, helps keep us ahead of the flotilla.

Today, Fundy Engineering is one of the largest employee-owned full-service multi-disciplinary engineering-consulting companies headquartered in Saint John. We primarily serve Atlantic Canada and New England through our head office and a branch office in Clyde River, Prince Edward Island. Our staff of about 30 comprises professional, technical, and support personnel. We specialize in

bio-resources engineering, building systems engineering (*i.e.*, electrical, mechanical, and air quality), environmental engineering, geotechnical and survey engineering, and project management.

Vision, Values, & Locations.....	3
Our Team Approach.....	4
Licenses & Certifications.....	5
Corporate Growth & Recognition.....	6
Geotechnical & Survey Engineering.....	7
Environmental Engineering.....	9
Building Systems Engineering.....	11
Bio-Resources Engineering.....	13
Project Management.....	15
The Value We Bring To You.....	16
Award-Wining & Engaged Talent.....	17
We Are Community Ambassadors.....	18
Meet Our President & CEO.....	19
Senior Management.....	20
Talent Snapshots.....	21
What People Are Saying About Us.....	32

# Vision, Values, & Locations

**Serving Our Clients' Needs First** is Fundy Engineering's corporate vision and we apply it to all projects, big and small! We have built our strong business foundation on diversity and innovation, using an organic and holistic approach to problem solving, working in close association with our clients, and having a strong team-effort. We understand that our clients deserve top-quality service, on-time product delivery, and rates that are competitive and reasonable. Our staff is dedicated to providing you with technically-sound solutions and believes that is the best method for repeat business.

Fundy Engineering is uniquely positioned and well-differentiated from other mid-sized engineering-consulting companies. We have an impressive list of projects in many segments of the market throughout Atlantic Canada and New England, which was accomplished through our three value statements.

## Client-Focused

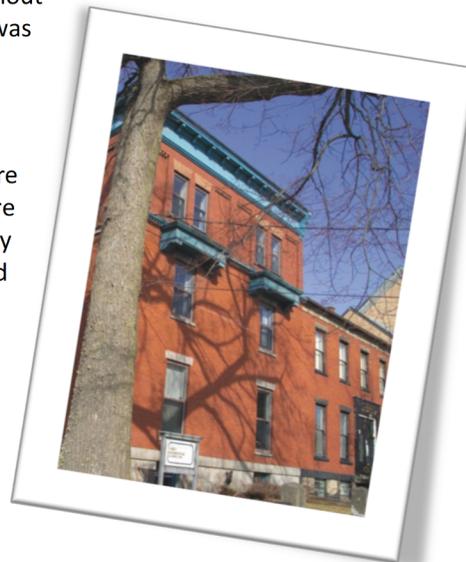
We believe corporate success and growth are achieved through serving our clients first and we are determined to provide our clients with the necessary skills and tools to complete a project on time and within budget.

## Professionalism

As professionals, we are committed to conducting our work ethically and with confidence, honesty, integrity, reliability, experience, due-diligence, and compassion.

## Top-Quality

We strive to excel in all aspects of our business and we approach every project with a perseverance to succeed. We are determined to provide all clients with top-quality solutions.



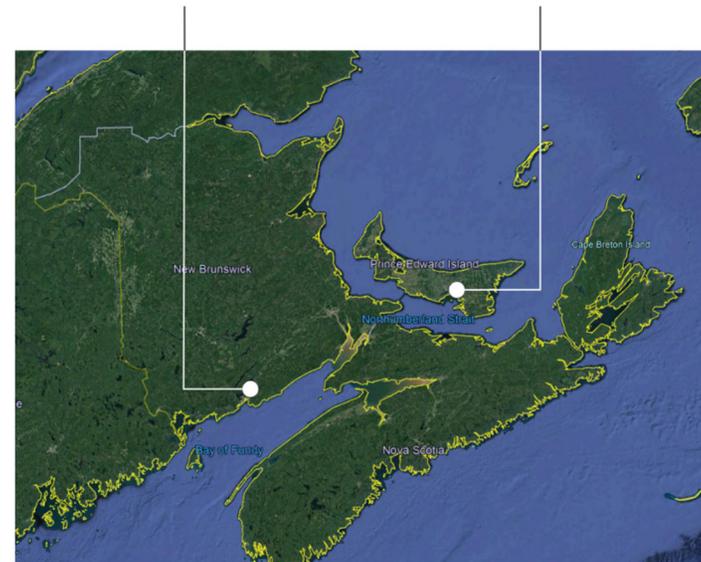
Fundy Engineering is headquartered in one of New Brunswick's largest urban centres. Our corporate office is located in the heart of Saint John in what was the YWCA building. The secure historic building (circa 1879) was repurposed to incorporate the engineering-consulting offices while maintaining much of its original character and charm. Our employees thrive in the enjoyable atmosphere of opportunity, productivity, teamwork, and success! Clients feel at home, whether dropping by for a chat with one of our staff members in their cozy offices or while attending a meeting in our open-atmosphere conference areas. We also have a branch office in Clyde River complete with a geotechnical laboratory.

### Saint John

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☎ 506.635.1566  
📠 506.635.0206

### Clyde River

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Clyde River, PE  
COA 1H1  
☎ 902.675.4885  
📠 902.675.4887



# Our Team Approach

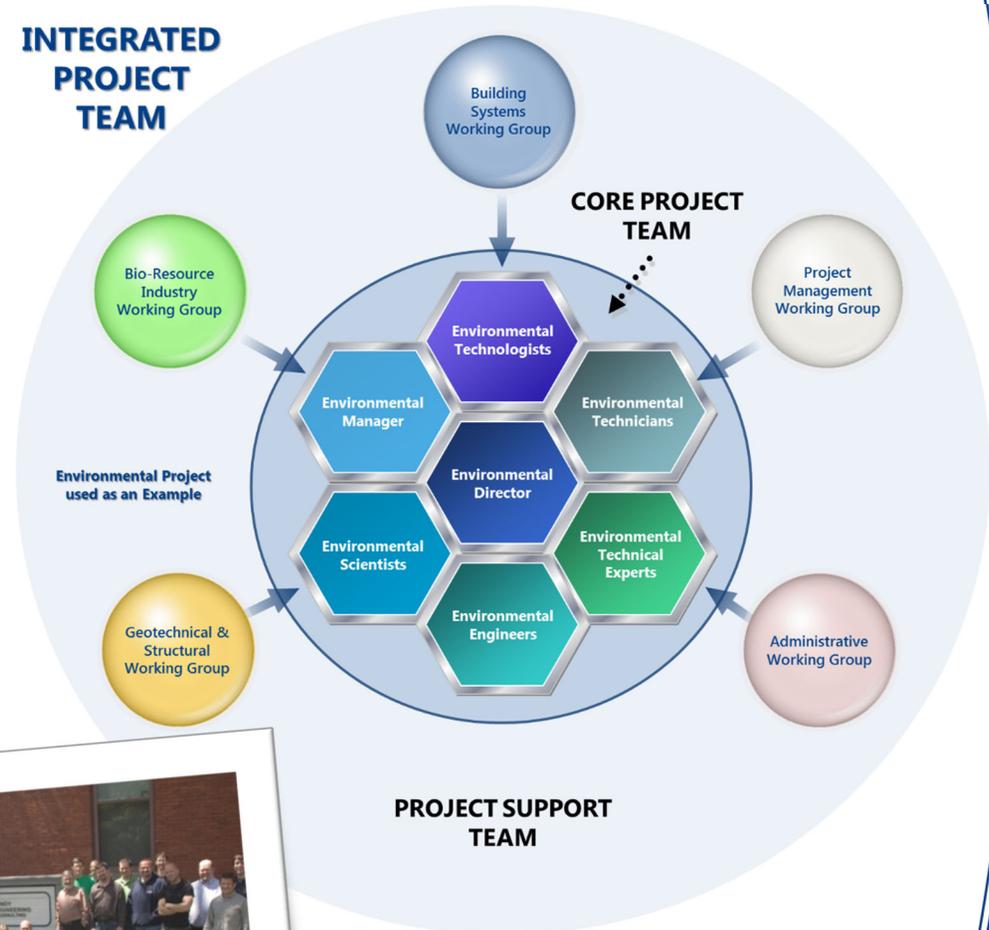


## Our Greatest Asset is Our Team and Our Intellectual Capital!

Collective employee expertise is one of the greatest strengths we provide our clients. The organic work culture at Fundy Engineering, designed in a manner to accomplish the specific tasks of our clients, is founded on our vision. Our technical skill and on-the-ground experience means we bring progressive and innovative approaches to all projects. We leverage the combined knowledge of staff in order to build the best team possible to develop and deliver successful project outcomes.

The use of integrated teams has become an integral part of our business landscape. We have shown that our integrated team environment gives us a competitive edge on multi-disciplinary projects. Our integrated teams, made up of employees from all service departments and all levels of the firm from students through highly skilled professionals to top-tier management, has a vested interest in the success of a project. Bringing a multi-disciplinary approach to the project while working towards a common goal improves problem solving abilities and results in more rigorous decision making by allowing people to get out of their normal professional silos to a place where they can see the bigger picture. Within a project team, members are assigned diversified roles according to their personal strengths. Our integrated team working structure is also designed to energize, empower, and enable project teams to rapidly and reliably deliver top-quality, customized services and results through client engagement and continuously learning and adapting to their changing needs and environments.

## INTEGRATED PROJECT TEAM



# Licenses & Certifications

Fundy Engineering is licensed as a practicing engineering-firm in:

- New Brunswick;
- Prince Edward Island;
- Nova Scotia;
- Newfoundland and Labrador;
- Alberta; and
- Maine.

Our professionals are licensed by the respective associations where we are designated to work (*e.g.*, Association of Professional Engineers and Geoscientists of New Brunswick, *etc.*). Fundy Engineering's professionals maintain up-to-date professional status by regularly attending training seminars, webinars, online courses, conferences, tradeshow, *etc.* Our staff is also active in the various professional and technical boards and associations, including:

- Association of Consulting Engineering Companies of New Brunswick;
- Association of Professional Engineers and Geoscientists of New Brunswick;
- New Brunswick Society of Certified Engineering Technicians and Technologists;
- EngineersPEI;
- Project Management Institute, NB Chapter; and
- American Society of Heating, Refrigeration, Ventilation, Air-Conditioning Engineers, New Brunswick and Prince Edward Island Chapter.

We also have employees with additional specific certifications, including:

Project Management Professional



Certified Environmental Site Assessor



Certified Water Damage Restoration Technician



Environmental Professional



Certified Energy Manager

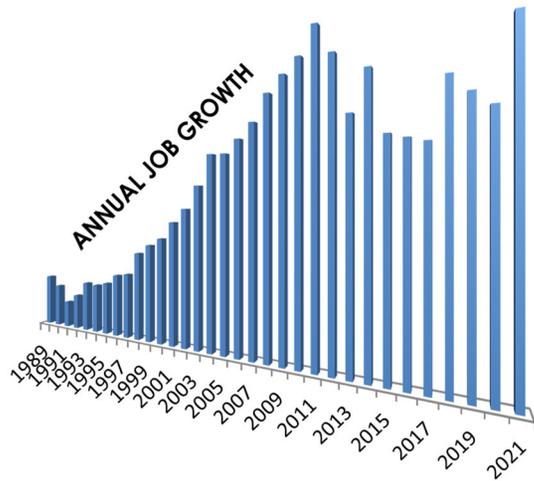


New Brunswick Land Surveyor



# Corporate Growth & Recognition

At inception, we completed about 150 jobs per year. Today, our annual jobs completed is almost five times that. Workload, value per job, and the number of employees have steadily increased between 1994 and 2011, fell off during the economic downturn of 2012-2013 and have been stable in the years since. Mergers and acquisitions over the past decade have led to Fundy Engineering being one of the only original New Brunswick full-service multi-disciplinary engineering-consulting remaining and we are proud of that! Although the company has seen considerable growth, we have preserved our revered corporate culture and core values.



Fundy Engineering has been recognized locally and regionally as an outstanding service provider by our employees, clients, and industry peers. Corporate excellence does not only influence our products and services, but also flows into the community. Our firm and employees have received many awards for outreach efforts. Below are the most recognizable corporate highlights.

## Engineering Excellence, 2020

A panel of peers affiliated with the Association of Consulting Engineering Companies of New Brunswick awarded Fundy Engineering with an Engineering

Excellence award for securing environmental approvals for the Violet Solar Farm, New Brunswick's first utility-scale solar project planned for Brunswick Mills.

## Champion of Cultural Diversity, 2018

The New Brunswick Multicultural Council named us as a Nominee in appreciation of our leadership and efforts to include newcomers in our workforce.

## Environmental Engineering Excellence, 2011

Industry peers affiliated with the Association of Consulting Engineering Companies of New Brunswick voted Fundy Engineering's brownfield restoration work worthy of Engineering Excellence because it involved innovative and cost-effective methods for safely reusing a former heavily contaminated site.

## Benefit to Society, 2009

Industry peers affiliated with the Association of Consulting Engineering Companies of New Brunswick voted Fundy Engineering's work on the qplex™ the greatest Benefit to Society in 2009 with respect to the strategies we used for selecting an environmentally sustainable site for the facility.

## HR Best Practices, 2009

In 2009, Fundy Engineering was featured for having some of the best Human Resources practices in Canada. To be featured in Environmental Careers Organization (ECO) Canada's HR Best Practices Report, it is mandatory that commitment to HR excellence is demonstrated by having employees complete ECO Canada's confidential employee satisfaction survey.

## Best Places to Work in Atlantic Canada, 2007

The *Best Companies Group*, in partnership with *Progress* magazine, undertake a regional program annually to determine the best places to work, which is based on an employer questionnaire and employee surveys. We were recognized in 2007 for being one of the Best Places to work in Atlantic Canada!

## Outstanding Business Achievement – Gold Award, 2006

The Saint John Board of Trade recognized Fundy Engineering for contributing to the economic progress and development of Saint John.



## GEOTECHNICAL & SURVEY ENGINEERING

Fundy Engineering was founded, in part, to provide clients with top-quality geotechnical engineering solutions and we have become recognized for offering practical geotechnical alternatives. Today, we provide clients with an extensive and comprehensive range of geotechnical design and inspection services. Our offerings include:

- site investigations for civil structures and earthworks;
- slope stability design, monitoring, and investigation;
- retaining structure design and inspection;
- foundation design and inspection for spread footings and piles;
- pile-driving inspection;
- pre-blast structural surveys;
- blast design, control, and monitoring;
- contract specification services and site supervision;
- materials testing for concrete, soil, steel, and asphalt;
- marine structures design and investigation;
- civil works design;
- stormwater management design; and
- forensic investigations and expert testimony.

Our laboratories in Saint John and Clyde River are used for completing most materials testing.

We have recently grown to include survey engineering. Our offerings in that discipline include:

- legal land surveying;
- land development planning and subdivision design;
- pre-engineering and topographic surveying;
- construction surveying;
- site controls and benchmarks; and
- 3D surveying and modelling.

We have been fortunate to be involved in many high-profile geotechnical and survey engineering projects and a snapshot of those jobs follows.

### Red Head Slope Stability

In Red Head, the Bay of Fundy's unrelenting tides have swallowed three homes and are threatening more homes and roadways as the waters advance inland. As a safety concern, our staff has been monitoring slope stability there for many years and have provided recommendations on securing the slopes. The most recent slope failure occurred in 2007 and we were there to document the effects.

### Gannet Rock Lighthouse 3D Scanning

Gannet Rock is located within the Bay of Fundy 13 km south of Grand Manan. A lighthouse was built and first lit there in 1831 because dangerous shoals in the area presented a hazard to ships entering the Bay of Fundy *en route* to Saint John. The seven-storey tapered octagonal lighthouse is the second-oldest wooden tower in Canada. We used a laser scanner to collect data in three-dimensions to determine how the site can be stabilized and redeveloped for the Grand Manan tourism industry.

### East Point Segmental Block Retaining Wall

Approximately 25 ha of exposed bedrock in east Saint John was levelled to accommodate new retail development. The site was levelled using controlled blasting techniques. We designed a segmental block retaining wall for an area of the development that was built up using blasted rock. A total of 1 836 blocks were used to build the retaining wall that is featured prominently at the site.

### Long Wharf Commercial Development

Fundy Engineering was responsible for supervising and inspecting the driving of over 300 H piles within the existing wharf subsurface. The piles were installed to support a proposed large-scale commercial office complex; the original site of Irving Oil Limited's proposed head office in Saint John.



## Market Slip Dredging

Sediment built up via natural siltation over 16 years to the point where maintenance dredging was required in 2020. We determined that 3 000 m<sup>2</sup> of material required removal to safely accommodate visiting recreational vessels and pleasure craft. We managed the project on behalf of the City of Saint John.

## 450 MW Belledune Thermal Generating Station

We were engaged to provide rock blasting control for preparing a 250 m × 300 m foundation at New Brunswick's largest coal-fired thermal generating station. The blast plan required using a series of small detonation points for removing the bedrock in a relatively straight line. We employed several seismographs for measuring peak particle velocity, displacement, and accelerations.

## Queen Elizabeth Hospital (QEH) Cancer Treatment Centre

The QEH Cancer Treatment Centre is home to Prince Edward Island's state-of-the-art high-precision radiation equipment. We completed materials testing during an expansion in 2017 to accommodate a third linear accelerator. Our responsibilities included inspections for soil compaction, rebar, concrete, concrete finishing, asphalt, footings, and quality control.

## Southern Alberta Utility-Scale Solar Farms

We developed stormwater management plans for two Irricana Power solar farms in southern Alberta, a 5 MW and an 11.3 MW facility. Hydrological modelling was completed to determine peak discharge and design volume for existing, interim / construction, and post-development site conditions and to develop appropriate stormwater management infrastructure.

## Digby Harbour Wharf and Breakwater

A comprehensive study of the marine infrastructure requirements was completed for the Digby Harbour Association. We evaluated the condition of existing wooden and concrete structures and a needs assessment was completed

by interviewing the various stakeholders. We provided recommendations on a harbour and breakwater design complete with cost-estimates and we inspected the work during construction to ensure conformance with the design.

## Jean Canfield Federal Building

We performed materials testing, soils compaction inspections, and concrete testing during construction of the office building. The facility is located in downtown Charlottetown on a former heavily contaminated site. The remediated site is now home to Public Works and Government Services Canada's most environmentally friendly building.

## Kingsbrae Garden Amphitheatre

Kingsbrae Garden is an 11 ha horticultural masterpiece that became home to the Kingsbrae International Residency for the Arts (KIRA) in 2018. We designed an amphitheatre for KIRA artist performances using 506 Redi-Rock® soil-reinforced blocks, which were used to create tiered seating and stairs for spectators.

## Cornwall Bypass Clyde River Bridge

The Cornwall Bypass routes the Trans-Canada Highway in Prince Edward Island around Cornwall by going between North River and New Haven. The route required construction of a large concrete and steel bridge to cross the Clyde River. We undertook geotechnical investigations to design three engineered pads capable of supporting a Manitowoc 440 ton heavy-lift crawler crane during the installation of the bridges' steel girders.

## Renforth Community Wharf

We oversaw the redesign and redevelopment of a community wharf in Rothesay. A sheet pile structure was designed and constructed to provide a solid and long-lasting structure for the wharf that is a hub of community activity ranging from the dragon boat races in the summer to the 100+ ice shack fishing community in the winter.



## ENVIRONMENTAL ENGINEERING

The environmental challenges we face today are not the same as those we faced a decade ago. Our natural environment is continuously becoming a greater concern in the world in which we live. Fundy Engineering is pleased to offer our clients a full-suite of environmental engineering services designed to maintain or improve the natural environment. We provide our services with the objective of strategically maneuvering our clients through the constantly changing regulatory environment to achieve permit closure and lessen the risk of non-compliance penalties. Fundy Engineering provides clients the following environmental engineering services:

- environmental sustainability and green initiatives;
- greenhouse gas emissions assessments;
- National Pollutant Release Inventory reporting;
- environmental impact assessments;
- environmental permitting, monitoring, and compliance;
- Phase I, Phase II, and Phase III environmental site assessments;
- indoor air quality investigations;
- habitat assessments and ecological surveys (flora and fauna surveys);
- watercourse and wetland classification and delineation;
- risk assessments;
- water supply source assessments;
- groundwater sampling, monitoring, and interpretation;
- groundwater remediation; and
- site remediation professional services.

### Salmon Aquaculture Greenhouse Gas Emissions Assessment

Cooke Aquaculture is an integrated aquaculture company based on the east coast of North America that is committed to the long-term social, economic, and environmental sustainability in the communities that they operate and the health of the marine resource upon which they depend. In 2016, we worked to

complete the requirements for Cooke to receive third-party certification for its Liverpool Sea Site under the Aquaculture Stewardship Council for environmental stewardship. In support of this, we calculated direct and indirect greenhouse gas emissions for several facilities in their supply chain.

### Responsible Shale Gas Development

In 2011, the Atlantica Centre for Energy contracted Fundy Engineering to develop a discussion paper on considerations for responsible gas development of the Frederick Brook Shale in New Brunswick. The paper serves as an instrument to inform the dialogue in New Brunswick on the potential development opportunities of a shale gas industry. The paper identifies a series of best regulatory practices and royalty regimes for the responsible development of the sector. Due to our knowledge on the shale gas file, we also prepared a brochure for the Atlantica Centre for Energy in 2015 regarding options for treating hydraulic fracturing wastewater.

### Canport™ LNG<sub>L</sub> Marine Terminal & Multi-Purpose Pier

Fundy Engineering was responsible for obtaining numerous environmental permits, including watercourse and wetland alteration permits and harmful alteration, disruption, and destruction of fish habitat authorizations, acquiring approvals to construct, developing environmental protection plans, and conducting environmental impact assessments for the \$750 million (USD) facility at Mispec Point. Since 2005, we have been completing regular environmental permitting, monitoring and compliance at Canada's first marine liquefied natural gas receiving and regasification terminal.

### Violet Utility-Scale Solar Farm

Violet is a solar farm proposed for northern New Brunswick to help the Province transition to a low-carbon economy. The 10 MW clean and renewable energy project will supply enough electricity for at least 2 000 homes. The facility size triggered the Province's environmental impact assessment (EIA) process. Field and desk-top studies demonstrated that the project will not yield a significant environmental impact and EIA approval was granted in early 2020.



## Irving Monobuoy and Anchor Chain Replacement

Irving Oil Limited (IOL) owns and operates the Canaport™ Crude Receiving Terminal at Mispec Point, which supplies Canada's largest oil refinery in east Saint John. A critical component of IOL's overall refining process is an offshore monobuoy that is used to offload crude from ultra-large crude carriers one at a time. In 2018, the 1988 second-generation monobuoy was replaced with a new state-of-the-art 400 tonne monobuoy and in 2020 the upper portion on six of the eight heavy pre-tensioned anchor chains was replaced. All of the replacement work required stakeholder consultation, securing several environmental permits, and developing a detailed environmental protection plan.

## Ghost Fishing by Derelict Lobster Traps in LFA 36

Bay of Fundy lobster fishers feared that construction of the Canaport™ LNG<sub>LP</sub> facility would increase the incidence of fishing gear loss. One consequence of losing lobster traps is ghost fishing whereby the gear lethally fishes for target and non-target species. As part of their corporate social responsibility to the Saint John community, Canaport™ LNG<sub>LP</sub> launched a cooperative project, undertaken by Fundy Engineering, to retrieve derelict lobster gear for protecting and sustaining a local traditional livelihood in lobster fishing area 36.

## Former McKnight Motors Contaminated Site

Historically, the former McKnight Motors property, located on Rothesay Avenue in Saint John, was used as a gasoline filling station and an automobile service / salvage yard. The site was also used for manufacturing roofing and building materials. As a result, the subsurface was highly contaminated with heavy metals, petroleum hydrocarbons, and polycyclic aromatic hydrocarbons. Our testing indicated that the metals were non-leachable and could be risk-managed on-site. All contaminated soils above regulatory criteria are stored on-site within a geomembrane lined pit. We received regulatory file closure in late 2009 and the site has been redeveloped for commercial use. In early 2011, we won an engineering excellence award from the Association of Consulting Engineering Companies of NB for this innovative work.

## Burchill Wind Project

The ten turbine 45 MW Burchill Wind Project will provide Saint John Energy with additional renewable energy sources within their portfolio. We were tasked with providing Saint John Energy with an environmental permitting roadmap and a setback optimization analysis for the turbines. We were contracted by the developer, Natural Forces, to undertake ground-truthing exercises across the 1 658 ha site. That work included identifying and delineating watercourses and wetlands and identifying and characterizing flora, fauna, and their habitats.

## Irving Pulp & Paper Reversing Falls Mill Modernization

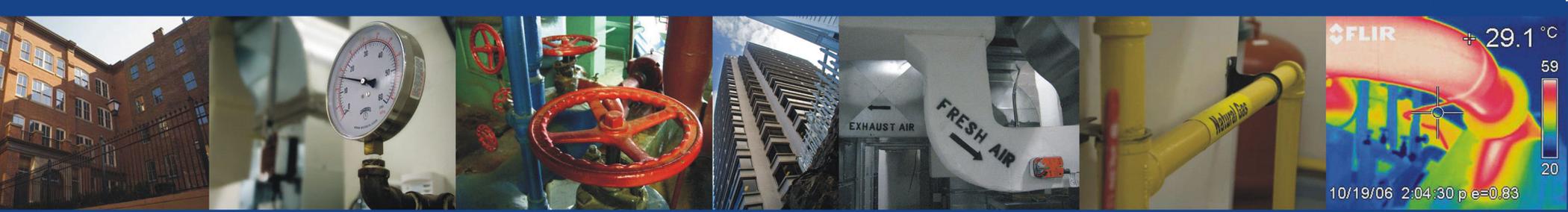
Irving Pulp & Paper, Limited continually modernizes and upgrades the Saint John Reversing Falls Kraft Mill. Recent modernization projects, such as chip handling upgrades, constructing a continuous cooking digester, and installing a new pulp dryer, required approval through environmental impact assessment processes. We successfully shepherded each project through the regulatory process.

## Former Dutch Point Sewage Lagoon Wetland Restoration

In the 1970s, a backwater area of the Kennebecasis River adjacent to Dutch Point in Hampton was developed into a municipal wastewater treatment lagoon. In 2005, the lagoon was decommissioned when a new treatment plant was brought on-line. Fundy Engineering worked with the Town of Hampton and Canaport™ LNG<sub>LP</sub> to reclaim the lagoon and transform it into a functioning wetland. Restoration efforts were completed in 2010 and the area has been transformed to a vibrant ecosystem with public access.

## Water Supply Source Assessments

Fundy Engineering is routinely hired by local developers to undertake potable water supply source assessments. Through this process, we characterize groundwater quantity and quality and provide information to the client on whether or not development is likely to be possible in light of the underlying hydrogeological conditions. We also provide information to our clients on how to best sustain this precious resource.



## BUILDING SYSTEMS ENGINEERING

Fundy Engineering offers complete building systems services in mechanical and electrical engineering. Our mechanical engineering services include:

- project monitoring / quantity surveys;
- three-dimensional building renderings and visualization;
- Heating, Ventilation, and Air-Conditioning (HVAC) design and inspection;
- plumbing system design;
- fire protection system design;
- controls and instrumentation design;
- refrigeration systems design and inspection;
- mechanical systems building inspections;
- on-site wastewater treatment design;
- indoor air quality assessments; and
- Code compliance and design inspection services for design / build projects and property condition assessments.

Our electrical engineering service offerings include:

- arc flash studies;
- building energy audits and energy modelling;
- analysis of power consumption for demand, power factor, and harmonics;
- lighting, power, and communications design;
- process, controls, and instrumentation design;
- electrical systems design and inspection;
- electric heating design;
- fire alarm system design;
- security and closed circuit television design;
- telecommunications distribution design;
- theatre lighting and power design; and
- integrated systems testing.

Keeping abreast of emerging technologies, we employ AutoCAD, Autodesk Revit MEP, Dynamo, and Enscape™ for completing building systems designs.

Some of the many projects that we have been involved with are highlighted below.

### Prince Edward Island Long-Term Care Facilities

Fundy Engineering was part of the team contracted to design the mechanical and electrical building systems for Maplewood Manor (48 beds, Alberton), Coleville Manor (52 beds, Souris), Summerset Manor (92 beds, Summerside), and PE Home (128 beds, Charlottetown). Mechanical design included HVAC, plumbing, and building management systems and electrical design included power distribution, communications, interior and exterior lighting, emergency power supply, access control and security systems, and nurse call systems.

### Bell / Aliant 3.0 MW Generator

To accommodate ever-increasing data load, Bell / Aliant contracted us to oversee a 3.0 MW generator upgrade. The project involved a series of tasks and construction phases be simultaneously coordinated (*e.g.*, generator ventilation, fuel delivery, structural, mechanical, electrical, *etc.*) in order to meet the owner's tight schedule while ensuring that the existing system was never without emergency back-up power in order to maintain system integrity.

### AV Cell Inc. Heat Exchanger and Quenching Tank Venting System

Fundy Engineering's building systems team has designed various systems for AV Cell Inc.'s specialty pulp mill in Atholville. A heat exchanger was designed for recovering boiler makeup water in order to reduce heating costs and a relief venting system was designed to safely release gases from the new 416 000 L quenching tank at the Mill. For the work, our team produced piping and instrumentation drawings for the client, sized pipes, valves, connections, *etc.*, and generated 3D drawings in Autodesk Revit in order for the client to clearly visualize the newly designed systems before they were constructed at the Mill.



### **Saint John Energy Headquarters Building Systems Design**

Working with Bergmark Guimond Hammarlund Jones Architects, our team designed the mechanical and electrical systems for Saint John Energy’s new headquarters in west Saint John. The facility consists of personnel offices, a public payment centre, equipment stores, maintenance shops, and an equipment garage. Mechanical work included design and inspection of the HVAC, plumbing, and building management systems. Electrical design and inspection comprised power distribution, communications, lighting, emergency power supply, and fire and security systems.

### **Irving Pulp & Paper Reversing Falls Mill Modernization**

Irving Pulp & Paper, Limited continually modernizes and upgrades the Saint John Reversing Falls Kraft Mill. The Mill is confined to about 50 ha so space is limited for modernization and upgrade projects. 3D survey data for the site was imported to the architectural visualization software Enscape™, which is now used to prepare renderings of proposed developments at the Mill. This visualization saves time and money during the engineering planning processes.

### **Miramichi Courthouse & City Jail Electrical Design**

The Department of Supply and Services contracted us to design the electrical systems for the new Miramichi Courthouse and attached City Jail. Our design work for the complex state-of-the-art facility included interior and exterior lighting, all utility services and distribution, communications systems, access control, security systems, and closed-circuit TV. On-site inspections during construction were also completed for contractor compliance.

### **Multi-Residential Building Project Monitoring**

Construction projects are exposed to a broad range of risks and uncertainties. We have completed project monitoring for several Canadian financial lending institutions to ensure that any material changes, actual or potential, are brought to their attention as early as possible on multi-residential construction projects. This helps to ensure their infrastructure investments are protected.

### **Bell Canada Arc Flash Studies**

Bell, Canada’s largest telecommunications company, require that short circuit analyses, arc flash hazard assessments, and protective device coordination studies be completed on the electrical distribution systems within their facilities. We have completed those services at > 30 sites across Atlantic Canada as part of Bell’s corporate electrical safety program.

### **Veranova Properties Indoor Air Quality Assessments**

Veranova Properties Limited secures distressed residential units across Canada and within some of their properties they encounter air quality problems. Fundy Engineering has been contracted for assessing the source of the air quality problems, most likely due to an oil spill or mould, within properties in New Brunswick, Nova Scotia, and Prince Edward Island. Following the assessment we provide recommendations for remediating the issues prior to resale.

### **Integrated Fire Protection and Life Safety Systems Testing**

Multi-residential buildings are becoming larger and their fire protection and life safety systems are complex. Our building systems team conducts integrated systems testing and coordination exercises for clients throughout the Maritimes. We complete the testing during commissioning to ensure the proper operation and inter-relationship between the systems. We also confirm that the systems comply with the provisions of the National Building Code.

### **CMHC Housing Inspection Services**

Our building services team was contracted by OZHI LP First Nations Professional Services to provide inspections services to First Nations communities in support of Canada Mortgage and Housing Corporation’s (CMHC’s) programs. Those services included progress reviews and physical condition reviews under the On-Reserve Non-Profit Housing Program and initial property reviews, work descriptions, and progress reviews for renovation programs. Members of our team visited sites across Atlantic Canada, Quebec, and Saskatchewan.



## BIO-RESOURCES ENGINEERING

New Brunswick's aquaculture industry is worth almost \$1.4 billion annually. Since we first began in 1989, Fundy Engineering has contributed to this and other bio-resource industries by providing engineering-consulting services to aquaculture, fisheries, food-processing, and agricultural companies. Our capabilities include:

- aquaculture site selection and evaluation;
- aquaculture site inspections;
- research and development planning;
- marine containment and mooring design;
- site selection and evaluation;
- equipment and plant process design;
- operation planning;
- new species development;
- economic feasibility studies;
- post-harvest handling and service;
- water supply and waste handling;
- wastewater treatment design and assessment;
- wharf assessment and design; and
- new enterprise planning.

The Bio-Resources industry has proven to be a valuable market for our company, as demonstrated through the projects highlighted below.

### Pilot-Scale Introduction of Wild-Trapped Eastern Wild Turkey to Southcentral NB

Enterprise Fundy, in partnership with the Rural Economic Development Alliance, hired us to undertake an environmental impact assessment. The proposed pilot project involves the introduction of wild-trapped eastern wild turkeys to central

southern New Brunswick. The pilot project would evaluate the field suitability of the release areas as turkey habitat and evaluate whether a population will be able to grow and naturally sustain itself throughout southcentral New Brunswick. At this time the project remains on hold, but turkeys continue to migrate northward from neighbouring Maine.

### Pimbrettera Dam & Lagoon in Sri Lanka

The Canadian International Development Agency engaged us to complete design work for an inland fisheries project in Sri Lanka. The work included on-site evaluation of soils and providing a cost-estimate for an integrated fisheries development. We designed a dam, spillway, hatchery, and grow-out facility for the international development project.

### Musquash & Spruce Lake Watershed Designation

The City of Saint John hired our bio-resources team to review land-use and threats to water quality within the Musquash and Spruce Lake watersheds. After consulting with numerous stakeholders, we issued a report that highlighted concerns in the watersheds, including commercial forestry and fishing, hunting and trapping, and recreational camp usage.

### Artificial Wetland for Treating Fish Hatchery Wastewater

Fundy Engineering was engaged by a fish hatchery operator in PEI to design a wetland for polishing wastewater at their re-circulating fish hatchery. Effluent guidelines imposed by the regulator and small footprint for the facility presented challenges to the design, which were overcome using our innovations.

### Tunicate Control on Mussel Farms

The mussel culture industry in PEI has been plagued by a tunicate infestation since 2000, which has resulted in increased handling costs and decreased yield. Fundy Engineering reviewed existing *ad hoc* technologies for dealing with tunicates and, understanding the structure, biology, and ecology of the organism, we provided recommendations for machinery design improvements.



### **New Brunswick Oyster Culture Industry Assessment**

Our bio-resources team evaluated the socio-economic impact and assessment of infrastructure needs for the New Brunswick oyster culture industry, which has grown considerably in recent years. We conducted many interviews, primarily in French, with industry participants and held meetings with government agencies. Recommendations were put forward by us for improving infrastructure to adequately serve the oyster culture industry. Our report included infrastructure design concepts and cost-estimates.

### **Potato & Squash Processor Waste Characterization**

A processor of bulk frozen potatoes and squash contracted our bio-resources team to characterize their waste and identify treatment options. Based on our review and design, an activated sludge treatment system was installed to handle the wastewater generated at the facility.

### **Red Deer Farm Quarantine Facility & Research Program**

In order to import Red Deer into New Brunswick, our client was required by Agriculture Canada to develop an approved quarantine facility for up to 500 animals. Our design included security measures to prevent animal escape and segregation facilities for studying and treating individual animals. Through a research program, we provided the client with husbandry techniques for looking after and properly caring for the animals.

### **Halibut Nursery & Grow-Out Facility**

Following our successful completion of a feasibility study for a land-based facility to grow 5 g halibut fry to 80 g juveniles suitable for stocking sea cages, we were further engaged to design a grow-out facility. Our design included a detailed list of equipment required for the facility and included estimating capital and operating costs.

### **Belleisle Foods Ltd. Wastewater Treatment Lagoon**

In conjunction with Godfrey Associates Ltd. (now Dillon), we designed a lagoon for treating wastewater produced at the Belleisle Foods processing plant. The project involved systematically evaluating the nature and quantity of wastewater generated daily within the processing plant. We reviewed the on-site soil during the design of the lagoon and specified all piping and aeration equipment to be used for adequately treating the waste.

### **Feasibility of Power Plant Waste Heat Supporting a Large-Scale Trout Farm**

An oil-fired thermal generating station in northern New Brunswick uses stream water in its cooling processes. Because the plant uses non-chemical means to control biological growth in its piping, it was an attractive site for establishing a large-scale trout farm. Our bio-resources team conducted a feasibility study for developing a trout rearing facility at the site.

### **Saltwater Supply for the Huntsman Marine Science Centre**

The Huntsman Marine Science Centre is a non-profit institution dedicated to marine biological education and research. We were contracted to design and supervise the installation of a new salt water line, reservoir, pumps, and filtering system for the saltwater biological system at the facility. We were also involved in the design of an early rearing research laboratory at the Cove Lab facility there.

### **Sea Urchin Gear Design**

The Campobello Fisherman's Cooperative engaged Fundy Engineering to research available technology in drag fishing gear and to develop a unique design for sea urchin harvesting. We successfully developed a gear design that minimizes damage to the collected sea urchins and the harvest area.



## PROJECT MANAGEMENT

Fundy Engineering offers clients project management services. Three of our team members are certified by the Project Management Institute as a Project Management Professionals (PMPs). Our personnel handle the management of small- and medium-scale projects. We work with our clients to ensure that activities are done on time, within budget, and according to specifications. Our abilities include:

- defining a project's objectives;
- identifying activities and resources required to meet the stated objectives;
- establishing sequencing relationships for project activities;
- setting time estimates for project activities;
- determining project completion milestones;
- comparing project scheduling objectives; and
- determining resource requirements to meet the stated objectives.

Our staff has been immersed in exciting project management services as noted below.

### Northeast Energy Corridor

Our project management team worked with Fort Reliance on the commercial and technical feasibility of a multi-use energy transmission corridor. Overall, the project could create opportunities for more green power in the northeast. The corridor would extend from New Brunswick into Maine and would cleanly, reliably, and securely deliver a diverse portfolio of energy products.

### Irving Oil Refinery

We worked with Irving Oil Limited at their refinery, the largest oil refining facility in Canada, in the procurement services field. We prepared contracts for professional services, administered those contracts, and tendered for equipment

installation. Our project management team also provided quality assurance and quality control services and cost control.

### Long Wharf Commercial Development

One of Fundy Engineering's project managers was seconded by Fort Reliance to provide project management services. The services were provided for the Irving Oil Limited head office originally proposed for Long Wharf in Saint John. We developed a reporting process to the Program Management Office and coordinated progress status reporting and risk management.

### Energy Hub Investment Opportunity

Our project management team partnered with Deloitte Touche LLP to assist Enterprise Saint John with an opportunity planning project. The team identified and mapped next generation investment opportunities that would fully leverage the Saint John region and New Brunswick's existing energy hub assets. During the project they brought together subject matter experts to provide in-depth information on various aspects of the project to all involved.

### Canaport™ LNG<sub>LP</sub> Terminal & Multi-Purpose Pier

During the construction of Canada's first LNG marine terminal, Fundy Engineering provided project management support to Canaport™ LNG<sub>LP</sub>. Our team provided project supervision of on-site health, environment, safety, and security during construction and start-up of the \$750 million (USD) facility at Mispic Point. Due to their experience and track record, one of our project managers was hired on full-time to take the facility through operational stages.

### Canaport™ LNG<sub>LP</sub> Deep Water Jetty Inspection

Fundy Engineering managed the structural engineering and support dive team for the deep water jetty inspection of the \$750 million (USD) facility at Mispic Point. The jetty comprises mooring dolphins, catwalks, piping, fire suppression systems, and other essential structures required for the unloading and loading of liquefied natural gas from ships.

# The Value We Bring To You

## Value-Added Engineering

Our employees strive to provide value-added engineering to all projects. One added value for our clients is the use of integrated teams that provide an optimum blend of skills. Drawing from our strong knowledge base is also an added value to our clients. We can often find specific solutions entirely in-house because we provide a full-suite of engineering services.

## Safety, Equity, & Competency

Safety and environment are paramount when we are working and our goal on all projects is to have zero health and safety incidents and environmental impacts. We provide our employees with health and safety training for job- and site-specific work. We endeavor to provide equal opportunities in employment promotion, wage, and benefit program administration and in all other privileges, terms, and conditions of employment.

Our continued growth and successes are based on the contributions of motivated, skilled, and dynamic employees. We consistently strive to recruit and hire top talent. We encourage and support all employees in participation of continued education programs for maintaining and improving their knowledge and competency.

## Quality Control & Quality Assurance

We uphold an in-house quality control / quality assurance program (*i.e.*, Organizational Quality Management). This program encompasses every aspect of our technical, scientific, and engineering work. The program is designed to provide our management with procedures for handling designs, drawings, and reports and to provide clients and regulators assurance of the overall technical integrity of each project. Each project is reviewed by a registered professional. We also adhere to any and all standards that are specified by the client.

## Project Scheduling

Our diverse team of professionals delivers projects on schedule. Staff recognize that time is of the essence in the completion of any project, big or small. For larger projects we employ the computer programs Microsoft® Office Project and monday.com for coordinating staff effort and ensuring that work is completed in a timely and organized fashion.

## Project Reporting & Cost-Control

Our staff delivers specific solutions that are efficient and cost-effective. At the outset of all projects, we present clients with a budget and schedule. This provides a general scope of work and the associated budget estimate. To ensure the best-value for our clients, we maintain cost and time records for each project. All projects are based on estimates of time and expenses.

## Value & Risk Management

Our project management team identifies, assesses, and prioritizes risk in order to minimize, monitor, and control the probability and / or impact of unfortunate events or maximize the realization of opportunities. Offering these services allows our clients to assess the potential severity and the probability of something occurring. It is a method of planning used to avoid / eliminate, reduce / mitigate, share / transfer, and / or retain / accept risk.

## Professional Liability Insurance

Fundy Engineering carries full errors and omissions professional liability insurance with an occurrence limit of \$2 million. Additionally, the firm has general liability insurance with a limit of \$3 million for each occurrence. Details of these policies are available upon request.

you're our customer

# Award Winning & Engaged Talent

## EMPLOYEE AWARDS & RECOGNITION

Our staff is regularly recognized within the local and regional communities for their contributions. Some employee accomplishments are noted below.

### Dave Richards

2016 Association of Consulting Engineering Companies of New Brunswick Young Professional Award

### Darryl Ford

2013 Fellow of Engineers Canada  
2006 Association of Consulting Engineering Companies of New Brunswick Recognition for Service Award

### Gordon Mouland

2003 Association of Professional Engineers and Geoscientists of New Brunswick Citizenship Award  
Ernst & Young Entrepreneur Of The Year® 2011 Atlantic Awards finalist

### Matt Alexander

2020 Fellow of Geoscientists Canada  
2011 Premier's Awards for Ontario College Graduates finalist  
A New Brunswick 2008 cohort of the 21inc 21 Leaders for the 21<sup>st</sup> Century

### Tim Ryan

A 2014-2015 cohort of the Wallace McCain Entrepreneurial Leadership Program (ELP8)

### Shari Seeley

A 2014-2015 cohort of the Wallace McCain 2iC program

## COMMUNITY ENGAGEMENT

Fundy Engineering understands that in order to grow our diverse workforce, it is important that our employees are engaged as ambassadors within the local and regional communities. All employees are encouraged to be plugged in to their

communities by being involved in volunteer and cultural activities during work and non-work hours because it is vital to the health of the local and regional economy. These important relationships allow our team, in part and as a whole, to learn, grow, and develop. Below are executive positions held by staff in 2021 for a broad range of community groups and organizations.

### Association of Heating, Refrigeration, and Air-Conditioning Engineers New Brunswick and Prince Edward Island Chapter

A global society advancing human well-being through sustainable technology for the built environment

**Ryan Gosson**, Past-President and Membership Promotion Chair

### Association of Professional Engineers & Geoscientists of New Brunswick

The agency that regulates the professional practice in New Brunswick

**Matt Alexander**, Geoscientists Canada Representative, APEGNB Council

**Darryl Ford**, Chair, Discipline Committee

### Atlantic Coastal Action Program, Saint John Chapter

A non-profit that partners and works with the Saint John community to provide solutions to existing and pending environmental problems

**Tim Ryan**, Board Member

### Atlantica Centre for Energy

An industry association that promotes the sustainable growth of the region's energy sector

**Gordon Mouland**, Vice Chair, Board of Directors

### Association of Consulting Engineering Companies of New Brunswick

A not-for-profit that represents the commercial interests of businesses that provide professional engineering services to the public and private sectors

**Tim Ryan**, Treasurer, Board of Directors

# We Are Community Ambassadors

## Eliot River Ramblers Soccer Club

A community soccer club in Cornwall, Prince Edward Island  
**Donnie Taweel**, Vice President, Board of Directors

## Lily Lake Pavilion

An organization that provides stewardship of the pavilion so that it may be used for the social welfare of Saint John citizens  
**Gordon Mouland**, Member, Board of Directors

## Miramichi Salmon Association

An organization that provides global-class leadership, stewardship, and conservation practices for the Miramichi Watershed to continuously preserve and advance its environmental integrity for the benefit of all species, in particular the Atlantic salmon  
**Gordon Mouland**, Member, Board of Directors  
**Matt Alexander**, Member Board of Directors

## Project Management Institute, New Brunswick Chapter

The Institute serves its membership through the advancement and improvement of project management  
**Crystal Caines**, Registrar and Treasurer, Local Events Committee

## Saint John YMCA

A charitable organization dedicated to helping children and families of Greater Saint John reach their full potential.  
**Darryl Ford**, Past Chair, YMCA of Greater Saint John and Chair, Saint John Field House Project

## Stonehammer Geopark

North America's first Global Geopark showcasing a billion years of history  
**Corporate Supporter**

## Rothesay Town Council

Rothesay is a bedroom community of about 12 000 people located in the Kennebecasis Valley outside of Saint John

**Matt Alexander**, Deputy Mayor, Chair of Utilities & Infrastructure Committee, Chair of Finance Committee, and Past-Chair Kennebecasis Regional Board of Police Commissioners

## Syrian Refugee Resettlement

Assisted with the resettlement of Syrian Refugees into the Greater Saint John region  
**Robert Hunt**, Member, Resettlement Committee

## Saint John Soap Box Derby

Amateur gravity racing event held at Lily Lake  
**Jon Pitman**, Member, Event Organizing Committee 2015, 2016, and 2017

## Saint John SPCA Animal Rescue

A non-profit organization dedicated to rescuing and providing temporary housing to stray and unwanted animals  
**Robert Hunt**, President, New Brunswick SPCA

To allow employees with the necessary time to build relationships that we feel are important within our communities, we allow each employee to spend up to 5 % of their paid work time to volunteer. Some of the other community groups our employees are also engaged members of are listed below.

- AMAZetorium
- Big Brothers Big Sisters
- Children's International Summer Villages
- Exploratorium
- Fundy Executive Association
- Saint John Hospital Foundation
- KV Minor Hockey Association
- Lancaster Minor Hockey Association
- Multiple Sclerosis Foundation
- NB Sailing Association
- Post-Secondary Education Advisory
- Red Cross
- Royal Kennebecasis Yacht Club
- Run for the Cure
- Saint John Board of Trade
- Union Club
- Uptown Saint John Inc.
- Marathon By The Sea

# Meet Our President & CEO

## Darryl G. Ford, P.Eng., FEC



### Building Systems Services Director

Darryl graduated from the University of New Brunswick in 1988 with a Bachelor of Science in Engineering. He is the President and CEO of Fundy Engineering and is also our director of building systems engineering services with more than 30 years of engineering experience. Darryl has been actively involved in the engineering practice, having served as the President of the Association of Consulting Engineering Companies-New Brunswick in 2005 to 2006, as the President of the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB) in 2012 to 2013, and as a New Brunswick Director for Engineers Canada between 2013 and 2018. He chaired APEGNB's CEO search committee and the Continued Competency Committee and is currently Chair of

the Discipline Committee. While on the Board for Engineers Canada, Darryl sat on various committees, including the CEO Compensation Committee, the CEO Search Committee, the Audit Committee, and he Chaired the Bridging Government and Engineers Committee. He is also active in our community. Darryl served as the Chair of the Project Steering Committee during construction of the Saint John Regional Y, he is the Past Chair of the YMCA of Greater Saint John Board and he is currently the YMCA Board representative on the YMCA Endowment Board.

Some of the projects Darryl has managed include: a comprehensive energy audit and design of a thermal oil heater retrofit and conversion to natural gas-fired burners with modern and efficient controls for Fundy Linen Service Inc.; design of HVAC systems, plumbing systems, hydronic heating systems, controls and instrumentation, and fire protection systems for Heritage Place in Saint John; providing design and project management services for the building systems of the new Saint John Energy Headquarters; overseeing the building systems design for several long-term care facilities in NB and PEI, the Saint John Diamond Jubilee Cruise Ship Terminal, a 3.0 MW Bell / Aliant Generator; and the Hewanorra International Airport in St. Lucia.



# Senior Management



## Gordon D. Mouland, M.Eng., P.Eng. Chairman of the Board

### Qualifications at a glance



- *M.Eng.*, Technical University of Nova Scotia, 1979
- *B.Eng.*, Technical University of Nova Scotia, 1976
- *B.Sc.*, Mt. Allison University, 1973
- *Professional Engineer*, APEGNB and APENS

**SPECIALTY AREAS:** geotechnical investigations, project management, marine structures, earthworks design, geotechnical forensics, slope stabilization, blasting design and control, concrete testing and design, and materials testing

### Profile

Gord is Past-President & CEO of Fundy Engineering and is now Chairman of the Board. He has more than 40 years of comprehensive engineering experience. In 1989, he co-founded Fundy Engineering & Consulting Ltd with two other partners. He is registered as a Professional Engineer in NB and NS. Gord was an Ernst & Young Entrepreneur Of The Year® 2011 Atlantic finalist. Some large-scale projects he has managed include: geotechnical design and investigation for the 450 MW Millbank Combustion Gas Turbine Generating Station; blasting control during the Belledune Generating Station Project; investigation of slope failure at the west-side Saint John Co-op Store; materials testing for the Prince County Hospital in Summerside; slope stabilization and placement of a 2 300 m<sup>2</sup> geomesh anchored retaining wall at a Fredericton retail outlet; marine structure development for Blacks Harbour and Digby Harbour; and geotechnical investigation and design for a large-scale commercial complex that was proposed for Long Wharf at the head of Saint John Harbour. Throughout his career he has been called as an expert witness in several high-profile court cases because of his specific expertise and the valuable experience he has to offer in these fields. As a senior advisor to the geotechnical engineering department, Gord has a focus on project design and supporting our young professionals.

## Shari Seeley Chief Financial Officer

### Qualifications at a glance



- *2iC*, Wallace McCain Institute, 2015
- *Business Technology Diploma*, New Brunswick Community College, 1992

**SPECIALTY AREAS:** human resources (*e.g.*, recruitment, retention, performance appraisals, *etc.*), purchasing, invoicing, and facilities management

### Profile

Shari works closely with staff and clients to continually enhance the overall day-to-day operations of Fundy Engineering. She supervises the office administration staff to ensure that our overall operations run smoothly, effectively, and efficiently. During her time with Fundy Engineering, Shari has overseen the company's growth from just four people to the current compliment of about 30 employees. She completed the 2iC program through the Wallace McCain Institute where she developed skills to help lead Fundy Engineering into the future.

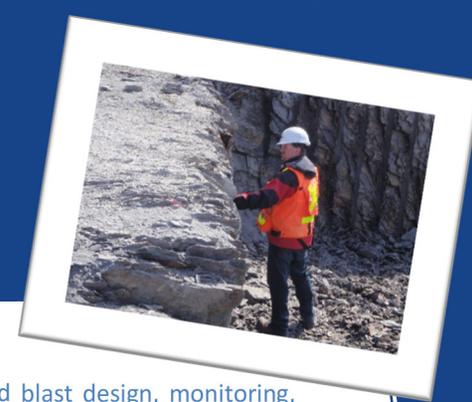
## Tim A. Ryan, M.Eng., P.Eng. Environmental Engineering Services Director

### Qualifications at a glance



- *ELP*, Wallace McCain Institute, 2015
- *M.Eng.*, University of New Brunswick, 1996
- *BASc.* in Engineering, University of Waterloo, 1990
- *Professional Engineer*, APEGNB, APEPEI, APENS, and APEGA

# Talent Snapshots



**SPECIALTY AREAS:** Phase I and II ESAs, site remediation, environmental management, environmental permitting, monitoring, and compliance, contaminant hydrogeology, and clean water initiatives

## Profile

Tim is active in the business community. He has led two trade missions to Alberta for securing business-to-business opportunities for New Brunswick-based companies. Some noteworthy projects Tim has managed include: environmental impact assessment, permitting, monitoring, and compliance for portions of the \$750 million (USD) Canaport™ LNG<sub>LP</sub> Marine Terminal; environmental analysis and permitting for the ultra-low sulphur diesel pipeline between the Irving Oil Limited Refinery and the East Saint John Terminal; obtaining environmental permits associated with the qplex™ recreational development in Quispamsis; undertaking high-level mapping of potential energy investments throughout southwestern NB for Enterprise Saint John; management of historical contamination at the site of the Garcelon Civic Centre in St. Stephen; and environmental management of the Kent Building Supplies in west Saint John. He graduated from the Entrepreneurial Leadership Program through the Wallace McCain Institute where he developed a broad base of skills to help lead Fundy Engineering into the future. Tim also manages the joint-venture agreement between Fundy Engineering and Summit Liability Solutions, a Calgary-based firm that primarily works in the upstream oil and gas industry.

## Alexander Mouland, P.Eng., PMP Geotechnical & Survey Engineering Services Director



### Qualifications at a glance

- BSEng., University of New Brunswick, 2005
- Professional Engineer, APEGNB, EngineersPEI
- Project Management Professional, PMI®

**SPECIALTY AREAS:** project management, geotechnical investigations, slope stabilization, geotechnical design, marine infrastructure design,

marine structures inspection and design, and blast design, monitoring, and control

## Profile

Blasting control for the Phase I and Phase II works of the Canaport™ LNG<sub>LP</sub> Marine Terminal & Multi-Purpose Pier Project, design of the Renforth Wharf reconstruction, geotechnical boreholes for the qplex™ recreational facility in Quispamsis, geotechnical investigations for the Saint John YMCA and various Public Works and Government Services Canada buildings in NB and NS are some of the projects AI has actively been involved with. Most recently, he has managed the structural engineering dive team for the deep water inspection of the Canaport™ LNG<sub>LP</sub> jetty, a geotechnical team for the Peel Plaza Parking Garage Project in Saint John, the design of engineered heavy lift crane pads in Clyde River, design of the Welshpool Wharf in Campobello, geotechnical investigations for the Fundy Trail extension, and geotechnical investigations for the Kent Building Supplies in west Saint John.

## Matthew D. Alexander, Ph.D., P.Geo., FGC, EP Environmental Sciences Manager



### Qualifications at a glance

- Ph.D., University of New Brunswick, 2006
- B.Sc. (Honours), St. Francis Xavier University, 2000
- Environmental Engineering Diploma (Honours), Sault College, 1998
- Professional Geoscientist, APEGNB and APGNS
- Environmental Professional, CECAB
- Management Certificate, Harvard Business, 2012

**SPECIALTY AREAS:** environmental impact assessments, hydrogeology and hydrology, environmental permitting, monitoring, and compliance, fisheries and wildlife, communications and public awareness, environmental research, environmental sustainability, and green initiatives

# FUNDY Engineering



## Profile

Matt has authored several papers published in international peer-reviewed scientific journals relating to his areas of expertise. He was named one of NB's 21 Leaders for the 21<sup>st</sup> Century and was a finalist in the Premier's Awards for Ontario College Graduates. He has worked on many projects including: assessing the quality of and threats to water supplied to RCMP facilities across PEI; environmental permitting, monitoring, and compliance for portions of the \$750 million (USD) Canaport™ LNG<sub>L</sub>P Terminal; environmental impact assessment, permitting, monitoring, and compliance for the chip handling and continuous cooking digester plant and the pulp dryer modernization project at the Reversing Falls Mill; environmental impact assessment, permitting, monitoring, and compliance for the Lake Utopia Paper effluent treatment upgrade; a white paper on considerations for responsible gas development of the Frederick Brook Shale in New Brunswick; a brochure on wastewater treatment options for natural gas development; environmental permitting for replacing the monobuoy and portions of its anchor chains at the Canaport™ Crude Receiving Terminal; development of high-yield groundwater supplies for aquaculture facilities in southwestern NB, including Acadian Sturgeon & Caviar Inc. at Carters Point and Quoddy Savour Seafood Ltd. in Pennfield; and environmental impact assessments for several utility-scale green energy projects. Matt is the Deputy Mayor of Rothesay where he also Chair's the Works and Utilities Committee, is Vice Chair of the Finance Committee, and is Past Chair of the Kennebecasis Regional Joint Board of Police Commissioners. He also serves as a Director for Geoscientists Canada on the APEGNB Provincial Council and as a peer reviewer for the Journal of Hydrology.

### Jacob D. Beam, P. Tech. Electrical Engineering Technologist



#### Qualifications at a glance

- *Electrical Engineering Technology Diploma*, New Brunswick Community College, 2014
- *Professional Technologist*, NBSCETT

**SPECIALTY AREAS:** AutoCAD and Autodesk Revit, energy logging and analysis, commercial and industrial electrical systems design, lighting analysis, fire alarm, security, and communications systems design, and arc flash and protective device studies

## Profile

Jacob uses AutoCAD and Autodesk Revit to produce highly detailed electrical drawings for clients. Some notable projects he has put his drafting skills to work on include the 30 bed expansion of the Kiwanis Nursing Home in Sussex and the Vimy Estates mixed income housing development in Saint John. Jacob has assisted in completing energy audits for the historic McAdam Railway Station and municipal building and Cedarcrest Gardens in Saint John. He has also been involved in electrical condition assessments and electrical site inspections, the completion of > 30 arc flash and protective device studies for Bell facilities throughout Atlantic Canada, and integrated systems testing for several large apartment complexes.

### Lindsay Cail, P. Tech. Geographical Information Systems Lead

#### Qualifications at a glance

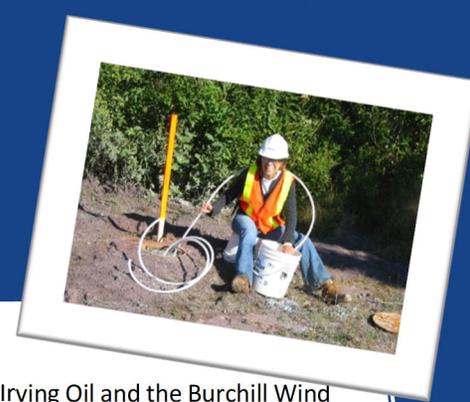


- *Environmental Technology Diploma*, New Brunswick Community College, 2013
- *Professional Technologist*, NBSCETT

**SPECIALTY AREAS:** ArcGIS, data management, environmental field sampling, environmental monitoring, and safety

## Profile

Lindsay brings a flair of creativity to our GIS mapping capabilities and makes difficult to understand concepts easy to appreciate by allowing maps to tell the story. In 2013, Lindsay did her on-the-job training at Fundy Engineering before graduating with a diploma in Environmental Technology. After spending several



years in Alberta, she returned to the east coast and started working with Fundy Engineering in September 2019. Lindsay has experience in the management of ash, lime, and biosolids residuals for large industrial operations, such as the City of Calgary’s Wastewater Treatment facilities, Agrium Lime, and several large-scale mines. While at Fundy Engineering, she has managed environmental data and produced various maps for several environmental impact assessments, such as *The Crossing*, a proposed commercial development in east Saint John, and the Burchill Wind Project, a proposed wind farm in west Saint John with up to ten turbines.

## Crystal Caines, P.Tech., B.E.T. (Env. St.), PMP Project Management Lead



### Qualifications at a glance

- B.E.T., Cape Breton University, 2004
- Environmental Technology Diploma, New Brunswick Community College, 2001
- Professional Technologist, NBSCETT
- Project Management Professional, PMI®

**SPECIALTY AREAS:** greenhouse gas emissions assessments, national pollutant release inventory reporting, environmental permitting, monitoring, and compliance, health and safety, and project management

### Profile

Crystal was the environmental compliance officer for two large-scale construction projects, the Canaport™ LNG<sub>LP</sub> Marine Terminal & Multi-Purpose Pier Project and the Red Head Secondary Access Road. In that capacity she ensured that the environment was held in the highest regard. During those projects, Crystal also gained considerable project management experience, such that she currently manages several medium- to large-scale projects. Crystal actively managed the transformation of the former Dutch Point Sewage Lagoon in Hampton and the former Matthew’s Cove Wastewater Treatment Lagoon in Quispamsis to vibrant and functioning wetlands, and she managed the design of a fuel depot for a major airport in the Caribbean. Crystal has managed several

environmental permitting and design projects for Irving Oil and the Burchill Wind Project proposed for west Saint John by Saint John Energy and Natural Forces. She performed greenhouse gas emission assessments for Cooke Aquaculture to receive environmental stewardship certification and routinely undertakes national pollutant release inventory reporting for Canaport™ LNG<sub>LP</sub>.

## Greg S. Derrah, P.Tech., CESA Environmental Site Assessment / Remediation Manager



### Qualifications at a glance

- Environmental Technology Diploma, New Brunswick Community College, 1999
- Professional Technologist, NBSCETT
- Certified Environmental Site Assessor, AESAC

**SPECIALTY AREAS:** Phase I, II, and III environmental site assessments, risk assessments, site remediation, risk management of contaminated sites, environmental audits, hazardous materials surveys, and contractor field supervision

### Profile

Greg has an extensive resume of Phase I and Phase II ESAs and site professional services for properties throughout Atlantic Canada, including: hazardous materials assessment and quantification and remedial action plan development for the former T.S. Simms & Co. Brush Factory property; remedial action plan development for the new Kent Building Supplies in west Saint John; environmental professional services for the Garcelon Civic Centre in St. Stephen; remedial action plan for the Jean Canfield Building site in Charlottetown; containment and innovative risk-management of contaminated soils on the former McKnight Motors Property in east Saint John; site remediation of a former maintenance garage in Campobello; site professional services for the abatement of lead-based paints within former warehouses in Perth Andover; and delineation and remediation of a fuel oil release to a fractured bedrock aquifer in Grand Bay-Westfield. Alone, Greg has supervised the installation of more than 2 000 boreholes and monitoring wells throughout the Maritimes and managed



over 500 remedial programs. His drive for success and on-time product delivery within budget maintains his strong track-record of repeat business.

**Angela Dick, B.Sc. ENR** *fluent en francais*  
**Intermediate GIS Analyst / Environmental Technologist**

Qualifications at a glance



- B.Sc. ENR, University of New Brunswick, 2019
- Certified Outdoor Educator, Canadian Wildlife Federation
- Certified Backpack Electrofisher
- Certified in CABIN sampling, Rapid Geomorphic Assessments, and Rapid Stream Assessments

**SPECIALTY AREAS:** ArcGIS, data management, project management, environmental field sampling, flora surveys, habitat assessment, and fish sampling

Profile

Angela came to Fundy Engineering after working for Fort Folly Habitat Recovery for two years where she focused on helping restore traditionally important species, such as the inner Bay of Fundy Atlantic salmon, and their habitats. She holds a Bachelor of Science in Environment and Natural Resources from the University of New Brunswick. Angela works with our environmental team to tell data stories with maps. She has been actively involved in the development of a fish ladder on Bean Brook in east Saint John, the environmental treatment facility for the Reversing Falls Mill, and several environmental assessments throughout New Brunswick.

**Richard Frenette, P.Eng.**  
**Intermediate Engineer / Revit Lead**



Qualifications at a glance

- BSEng., University of New Brunswick, 1999
- Professional Engineer, APEGNB

**SPECIALTY AREAS:** AutoCAD, Autodesk Revit, Enscape™, Dynamo, building systems, indoor air quality, and asbestos surveys

Profile

Richard has considerable experience using Autodesk Revit and AutoCAD to produce construction drawings within the Building Systems group. He has been involved in the preparation of drawings for a broad range of industrial and commercial projects, including a new venting system for a quenching tank, a new API650 white liquor tank, and process piping upgrade at AV Cell's specialty cellulose pulp mill in Altholville, various long-term care facilities in New Brunswick and Prince Edward Island, several Cannabis NB retail stores, the Bates Barn in Long Reach, the Diamond Jubilee Cruise Ship Terminal in Saint John, and the Lightfoot and Wolfville Winery in Wolfville, Nova Scotia. Recently, Richard has been working with the architectural visualization software Enscape™, which allows our clients to walk through a fully rendered project before it is built. This has been extremely useful for large-scale and complex industrial projects, such as modernization projects at the Reversing Falls Pulp Mill. Prior to working at Fundy Engineering, Richard managed a local environmental consulting company.

**Sarah Gilliland**  
**Administrative Assistant / Accounts Payable**

Qualifications at a glance



- Office Technology Diploma, New Brunswick Community College, 1999

**SPECIALTY AREAS:** accounts payable, customer relations, and administrative projects

Profile

Sarah assists the General Manager with accounts payable, payroll, and other general accounting and office tasks. She performs administrative tasks for each



of the Firm's engineering service departments. Sarah also performs general reception duties, such as directing incoming/outgoing mail and courier packages, doing corporate banking, managing and maintaining conference rooms, replenishing office supplies, overseeing petty cash, and completing other tasks that may arise.

## Ryan Gosson, P.Eng. Mechanical Engineering Lead



### Qualifications at a glance

- *B.Eng.*, Lakehead University, 2010
- *Mechanical Engineering Diploma*, New Brunswick Community College, 2007
- *Professional Engineer*, APEGNB

**SPECIALTY AREAS:** heating, ventilation, and air-conditioning design, plumbing and heating design, property condition assessments, commercial kitchen ventilation, and septic system design

### Profile

Ryan has considerable experience in mechanical design including hydronic heating, commercial and industrial ventilation, and plumbing, steam, and process piping. He has led the design team in a broad range of mechanical and multi-discipline projects, including commercial and retail fits-ups, such as the ANBL East Point Project, several Cannabis NB retail stores, the 48-bed Oromocto Seniors Care Home, the Fundy Funeral Home Expansion Project, the Kings Valley Church Renovation, and the new Leisure Time RV sales project. Ryan has designed septic systems for a broad range of facilities including the Wolfe Lake Visitors Centre in Fundy National Park and the Dolan Road Irving. He began his career as a summer intern with Fundy Engineering while a student at Lakehead University, gaining valuable hands-on experience, and design practice. He is an active member of the ASHRAE Association and currently holds a position on the Board of Governors and serves as the Past-President for 2021.

## Gregory K. Hoyt, CET, WRT Mechanical Drafting and Indoor Air Quality Lead



### Qualifications at a glance

- *Building Services Engineering Technology diploma*, New Brunswick Community College, 1997
- *Certified Engineering Technologist*, NBSCETT
- *Certified Water Restoration Technician*, IICRC

**SPECIALTY AREAS:** AutoCAD, indoor air quality, heating, ventilation, and air-conditioning systems, plumbing systems, fire protection systems, and kitchen ventilation systems

### Profile

Greg has conducted numerous indoor air quality assessments for commercial, industrial, and residential customers and has prepared and managed remediation action plans for many of those clients. He has also developed engineered drawings for heating, ventilation, and air-conditioning systems for commercial buildings throughout Atlantic Canada, provided design and drafting support for wastewater treatment systems for restaurants, convenience stores, manufactured home communities, as well as many other commercial and residential properties. Greg has several years' experience in working with the associated codes and standards that those systems must strictly adhere to in the design of commercial kitchen ventilation systems. Recently, he has been involved in the design of several modernization and upgrade projects at AV Group's Mills, including a blow tank, a demineralization plant cation tanks, and a heat exchange and SO<sub>2</sub> quenching tank ventilation system.



## Tyler Hogan, P.Tech. Civil Engineering Technologist

### Qualifications at a glance



- *Civil Engineering Technology Diploma in Building Systems*, New Brunswick Community College, 2014
- *Professional Technologist*, NBSCETT

**SPECIALTY AREAS:** AutoCAD, AutoCAD Plant3D, Autodesk® Inventor®, geotechnical investigations, material testing, construction surveying, and municipal inspections

### Profile

Tyler has extensive skills in visualizing and generating designs in three-dimensional formats using AutoCAD, AutoCAD Plant3D, and Autodesk® Inventor®. Prior to joining Fundy Engineering, Tyler worked for a geomembrane technologies company where he was their lead drafter. He gained over six years of local and international engineering technology experience with that company. While at Fundy Engineering, Tyler has been involved with preparing stormwater management plans for various developments, assisting with retaining wall designs, and aiding in geotechnical investigations, including an extensive geotechnical analysis for the Burchill Wind Farm.

## Robert Hunt, CTech Lead Geotechnical Drafting Technician

### Qualifications at a glance



- *Associate's degree in Engineering*, Central Florida College, 1996
- *Certified Technologist*, NBSCETT

**SPECIALTY AREAS:** Civil3D, ArcGIS, segmental retaining wall design, drainage systems design, inclinometer testing, slope feasibility analysis, information technology, and residential structure quality control

### Profile

Some of the more than 175 segmental retaining walls Robert has designed include the 1 836 block wall along Retail Drive in east Saint John, the wall in front of the Saint John Transit building, the wall along Burpee Avenue in Saint John north, and the Wright Street wall along the Saint John Throughway. A unique retaining wall he designed was for Kingsbrae Gardens. There, 506 Redi-Rock® soil-reinforced blocks, which were used to create tiered seating and stairs for spectators. He prepared the conceptual drawings for the Lorneville Barge Terminal and the design drawings for the Digby breakwater, Renforth Wharf, and the Welshpool Wharf. During the preparation of Long Wharf for a proposed commercial development, Robert interpreted the subsurface conditions based on available data and prepared drawings for the installation of over 300 H piles on that site. Robert has also generated drainage designs for several large-scale parking lots in Uptown Saint John.

## Engr. Seun Ijaola, P.Eng., P.E., PMP Electrical Engineer

### Qualifications at a glance



- *B.Sc. in Electrical / Electronic Engineering*, University of Lagos in Nigeria, 2006
- *Professional Engineer*, APEGNB
- *Registered Engineer*, Council for Regulation of Engineering in Nigeria
- *Project Management Professional*, PMI®

**SPECIALTY AREAS:** AutoCAD, energy management electrical design, lighting systems, fire detection and alarm systems, medium- and low-voltage power distribution systems, grounding and lighting protection systems, and project management

# FUNDY Engineering



## Profile

Seun joined Fundy Engineering in late 2017 after spending several years working as an electrical engineer and project manager in his homeland of Nigeria. While there, he worked on many electrical design projects, such as three blocks of terraced residential flats in Lagos, the Galaxy Mall in Kaduna, the Mechatronics Complex in Ibadan, and the Protea Hotel Select in Owerri. Since being with us, Seun has been involved in several electrical design projects including the sizing of electrical service entrances for residential and commercial projects, such as the Atlanding sea cucumber facility, the 96 room Days Inn on City Road, the Wolfe Lake Visitor Centre in Fundy National Park, the Harry Hachey Conference Centre, and the Fundy Park amphitheatre.

**Hector Lamprea, P.Eng., P.E., CEM**  
**Energy Efficiency Manager**

*domina el espanol*

## Qualifications at a glance



- B.ASc. in Mechanical Engineering, University of Andes in Bogota, 1990
- Professional Engineer, APEGNB and Colombia
- Certified Energy Manager, AEE

**SPECIALTY AREAS:** energy modelling, energy audits, heating system design, and HVAC design

## Profile

Hector has been involved in many projects, including the design of a new venting system for a quenching tank, new API650 white liquor tank and piping design, a medium consistency pump installation and piping design, and P&ID creation for different processes for AV Cell's specialty cellulose pulp mill in Atholville, CRN Registration for pressure vessels at Sweat Energy, the design of a dehumidification system for the G.E. Barbour peanut roaster facility in Sussex, the design of digital controls to replace pneumatic controls at Fundy Linen Service Inc., the design of a radiant heating system for Tabufile Atlantic Limited's

Saint John warehouse and the IBEWs office, and the design of an air-conditioning system for Exigen's Saint John data center office. He oversaw the boiler replacement for the nine-storey Fort Howe apartment building, the boiler replacement at the Brunswick House office tower in Uptown Saint John, the boiler conversion at Connors Brothers in Blacks Harbour, and completed energy audits for the Delta Hotel in Fredericton, the Algonquin Hotel in St. Andrews, and the Saint Andrews Biological Station.

**Patrick MacDonald, EIT**  
**Civil Engineering Lead**

## Qualifications at a glance



- Bachelor of Engineering, Lakehead University, 2019
- Civil Engineering Technology Diploma, Southern Alberta Institute of Technology, 2017
- Engineer-In-Training, EngineersPEI

**SPECIALTY AREAS:** on-site civil inspections, geotechnical investigations, materials testing, laboratory testing, quality control, data interpretation, and reporting

## Profile

Patrick did his on-the-job training with Fundy Engineering in the summer of 2018 and started at our PEI office upon graduation in 2019. He has been involved with a variety of projects across PEI. Some of the more noteworthy projects Patrick has worked on include: participating in a geotechnical investigation to provide recommendations for the All-Weather Highway bridge structure over the Hunter River; completing full-time inspection and testing services during the excavation and backfilling of the East Royalty Sewer Trunkmain replacement project; undertaking soils compaction and concrete testing at the Queens County Highway Depot; and testing materials and completing compaction test inspections for a new Parkland Fuels gas station and carwash.



## J. Andrew MacVey, P.Eng. Senior Associate (Retired)



### Qualifications at a glance

- BSEng., University of New Brunswick, 2001
- Professional Engineer, APEGNB

**SPECIALTY AREAS:** geotechnical investigations, blast monitoring and design, materials testing, and segmental retaining wall design

### Profile

Some projects Andy has worked on during his employment with Fundy include: developing small to large test pit programs for the design of structural foundations, such as the extensive program for the Kings Way Care Centre in Quispamsis; designing and monitoring rock blasting activities for a large-scale retail development in east Saint John and buried pipelines; monitoring and assessing slope stability in Red Head where previous slope failures have resulted in the loss of residences; and the design and construction monitoring of several high-profile retaining walls throughout Saint John including ones along Retail Drive, Water Street, Burpee Avenue, MacDonald Street and most recently amphitheatre seating for a performance stage in St. Andrews. He has also completed a considerable number of geotechnical investigations and foundation soils inspections for residential developers throughout southern New Brunswick.

## John McKelvey, P.Eng., NBLs Lead Survey Engineer and Legal Land Surveyor



### Qualifications at a glance

- BScE, University of New Brunswick, 2011
- Geomatics Engineering Technology Diploma, Centre of Geographic Services, 2006

- Professional Engineer, APEGNB
- New Brunswick Land Surveyor, ANBLS

**SPECIALTY AREAS:** survey engineering, legal land surveying, 3D scanning, civil surveying, industrial surveying, and project management

### Profile

John has over ten years of experience conducting engineering survey work on a broad range of commercial projects. He also has experience in executing and overseeing large-scale survey engineering projects in both industrial and urban environments. Those include both public and private sector projects, including: new infrastructure construction; new road construction; new building construction; subdivision design; and boundary delineation. John has conducted many survey engineering projects while at Fundy Engineering, such as monitoring and as-built surveys. He has also been involved in conducting 3D laser scanning in industry applications.

## Peter McKelvey, P.Eng. *fluent en francais, domina el espanol* Senior Associate (Retired)



### Qualifications at a glance

- B.Eng. in Bio-Resources Engineering, Technical University of Nova Scotia, 1978
- B.Sc. (Honours), Mt. Allison, 1974
- Professional Engineer, APEGNB

**SPECIALTY AREAS:** aquaculture, research and development planning, fisheries resources, food processing, property condition assessments, feasibility studies, and wastewater treatment

### Profile

Peter, who co-founded Fundy Engineering & Consulting Ltd with two other partners, is a Senior Associate with the Firm. His many projects include: completing more than 100 property condition assessments and Phase I ESAs annually; designing effluent systems for salmon hatcheries; designing marine

# FUNDY Engineering



cage systems for the aquaculture industry; designing wastewater treatment systems for food manufacturers; and providing advice on the design of an Arctic Char hatchery. Prior to retirement at the end of 2011, Peter was involved in the shellfish aquaculture industry, working with mussel producers in PEI to combat the spread of invasive species, and with NB Oyster growers to determine infrastructure and support needs of the industry.

## Ashley Merzetti Office Coordinator



### Qualifications at a glance

- *Office Technology Diploma, New Brunswick Community College, 2004*

**SPECIALTY AREAS:** accounts receivable, invoicing, customer / employer relations, and administrative / accounting support

### Profile

Ashley performs administrative and support activities for each of the Firm's engineering service departments. She directs visitors, fields telephone calls, completes paperwork, schedules client meetings, compiles reports and is in charge of all accounts receivable duties, invoicing, payroll, and time sheets. Ashley handles special administrative projects and assists the General Manager with full financial and material management.

## Myles Munn, P.Tech. Civil Engineering Technologist



### Qualifications at a glance

- *Civil Engineering Technology Diploma in Construction Management, New Brunswick Community College, 2011*

- *Professional Technologist, NBSCETT*

**SPECIALTY AREAS:** geotechnical investigations, materials testing, construction surveying, and municipal inspections

### Profile

Myles came to Fundy Engineering with extensive field and laboratory experience after working for several engineering and materials testing companies. He previously worked with a team that investigated chloride ion penetration from winter road salt applications on provincially owned bridges throughout New Brunswick. Having been certified as a drone operator, Myles mapped the deployment of a geosynthetic clay liner during the closure of a former landfill at the Point Lepreau Nuclear Generating Station. He also conducted geotechnical investigations and quality assurance testing during the rebuilding of the access road to New Brunswick's only nuclear facility. Myles has also participated in multiple materials testing programs of asphalt (*i.e.*, Marshall and Superpave), concrete, and soils for municipalities, including Saint John, Rothesay, Moncton, and Bathurst.

## Tyler Pineau Field Technician, Clyde River



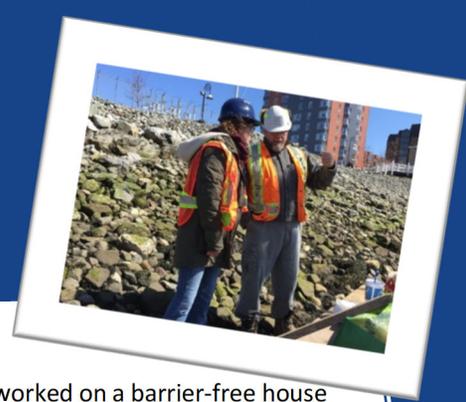
### Qualifications at a glance

- *Canadian Council of Independent Laboratories, Level 1 Certification*

**SPECIALTY AREAS:** concrete, soil densities, proctor compaction tests, and sieve analyses

### Profile

Tyler worked two years with Parkland Geo in Fort McMurray before joining Fundy Engineering. He has his Level 1 Certification for concrete inspection by the Canadian Council of Independent Laboratories and has training in WHMIS, First



Aid, confined spaces, trenching, and overhead powerlines. Since joining Fundy's Team, he has worked extensively across Prince Edward Island with our geotechnical team. Some projects Tyler has worked on include: the parking lot repairs / upgrades at the Joseph A. Ghiz Building; the expansion of the Kinlock Building; work at the Great Enlightenment Buddhist Institute Society; materials testing for the Colonel Gray and Spring Park sewer rehabilitation projects; and electrical upgrades at the Queen Elizabeth Hospital.

## Jon Pitman, CTech Building Systems CAD / Revit Technician



### Qualifications at a glance

- *Certified Technologist, NBSCETT*

**SPECIALTY AREAS:** architectural design, AutoCAD, Autodesk Revit, mechanical and electrical drafting, and property condition assessments

### Profile

Prior to joining us, Jon spent 17 years working with a local architectural firm where he aided in the design and drafting of architectural and structural components of many commercial and community projects including: Leinster Court; Lily Lake Pavilion; Riverview Town Hall; and the Tri-County Arena in Fredericton Junction. His experience at Fundy Engineering includes: conceptual design drafting of a value-added seafood processing plant in Scoudouc; plumbing drafting for Hampton Inn & Suites in Fredericton; structural drafting support for the Peel Plaza Parking Garage; deficiency inspection for Fundy Fencing's new building in Saint John; and mechanical and electrical design drafting for Marshalls department store in Moncton. Over the past few years, Jon has completed numerous CMHC housing inspections in Atlantic Canada, Quebec, and Saskatchewan, he has conducted many commercial property condition

assessments throughout Atlantic Canada, and he worked on a barrier-free house renovation for disabled veterans with the Department of Defence.

## Dave Richards, P.Eng., MBA Mechanical Systems Manager



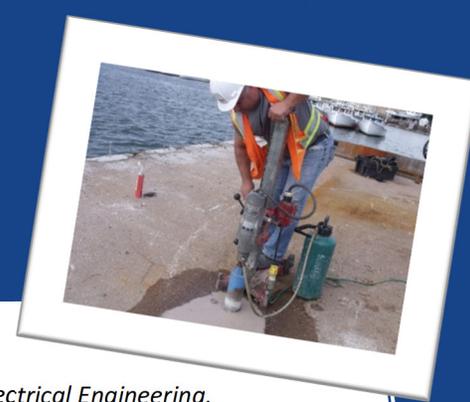
### Qualifications at a glance

- *MBA, University of New Brunswick, 2010*
- *BSEng., University of New Brunswick, 2008*
- *Professional Engineer, APEGNB, APEGNL, APENS*
- *Associate Member, ASHRAE*

**SPECIALTY AREAS:** fuel systems, hydronic heating, plumbing systems, heating, ventilation, refrigeration, and air-conditioning design, project and construction management, and project monitoring / quantity surveys

### Profile

Dave has been actively involved in many projects including: various studies and design work for Bell facilities across Atlantic Canada; heating feasibility studies for several Scotiabank locations throughout the Maritimes in order to recommend heating upgrades; mechanical design for several long-term care centers in Prince Edward Island, the 75-bed Mill Cove Nursing Home, and the Kennebecasis Public Library; design of the mechanical systems for the Ordnance Building in Saint John, the Dieppe Center for Arts, and the Lily Café at the Lily Lake Pavilion; and project monitoring / quantity surveys for several multi-unit residential construction projects. Some unique projects he has been involved with include the design of a pipe restraint system used while pipes were flushed during commissioning of Saint John Water's water treatment plant and an oxygen injection system for finfish sea cages. In 2016, Dave was recognized as a future leader in the Engineering industry through the awarding of the Association of Consulting Engineers of New Brunswick Young Professionals Award.



## Bhupinder Singh Revit Lead



### Qualifications at a glance

- *Autodesk Revit Mechanical Certification*, Autodesk, 2016
- *Bachelor of Technology in Mechanical Engineering*, Manav Bharti University in India, 2014
- *Diploma in Mechanical Engineering*, India Institute of Advanced Studies in Education, 2011

**SPECIALTY AREAS:** Revit, NavisWorks, and mechanical, electrical, and plumbing systems

### Profile

Bhupinder had over 11 years of foreign work experience using Revit three-dimensional Mechanical, Electrical, and Plumbing (MEP) Building Information Modelling (BIM) software before starting at Fundy Engineering. His repertoire of BIM includes healthcare, retail, hospitality, commercial, and residential. Bhupinder worked on the design of a new educational building at the University of Waterloo, a new casino in Woodbine, Ontario, and expansion of the West Park Hospital in Toronto. His BIM work abroad is extensive and includes work on the Australian West Gate Tunnel Project, the JVC Twin Tower s-SKAI in Dubai, expansion at the Gatwick and London City Airport, and the King Abdullah Petroleum Studies and Research Centre in Saudi Arabia. At Fundy Engineering, Bhupinder has produced many MEP 2D and 3D drawings with Revit, AutoCAD, and Navisworks for various residential, commercial, and industrial projects.

## Dexter Tan, TGIT Junior Electrical Engineering Technologist



### Qualifications at a glance

- *Electrical Engineering Technology diploma*, New Brunswick Community College, 2019

- *achelor of Science in Electrical Engineering*, Western Mindanao State University in Zamboanga City of the Philippines, 1993
- *Technology Graduate in Training*, NBSCETT

**SPECIALTY AREAS:** AutoCAD, electrical design, electrical equipment sizing, residential home design and build, and civil works design

### Profile

While working in the Philippines, Dexter acquired a considerable amount of knowledge in designing and building one and two storey residential homes. In Saudi Arabia, he was involved with the design of large-scale parking lots for facilities like the Dubai International Airport, which is the fifth busiest airport in the world. After immigrating to Canada, Dexter enrolled in the Electrical Engineering program at the Saint John campus of the New Brunswick Community College. He completed his on-the-job training at Fundy Engineering and joined our team upon graduation. Projects Dexter has been involved with while at Fundy Engineering include: electrical service design for several commercial buildings in Saint John; electrical service design for an indoor and outdoor cannabis grow-out facility in Nova Scotia's Annapolis Valley; removal of an industrial boiler at a Bell facility in Cape Breton; and electrical service design for a restaurant and apartment complex in Florenceville.

## Donnie Taweel, CET Materials Science Manager and Clyde River Branch Manager

### Qualifications at a glance

- *Construction Technology diploma*, Holland College, 1990
- *Certified Engineering Technologist*, ACETTPEI
- *American Concrete Institution Certified*, ACI



**SPECIALTY AREAS:** geotechnical investigations, materials testing, laboratory testing, and environmental site assessments



## Profile

Donnie has participated in numerous projects across Prince Edward Island, including: materials testing for several long-term care facilities; materials testing for the Prince County Hospital in Summerside; materials testing for various public wharves; soils, concrete, and asphalt-testing for the new Summerside Wellness Centre and Medical Centre; concrete testing for the Jean Canfield Government of Canada Building in Charlottetown; concrete inspections for the Queen Elizabeth Hospital expansion and renovations to the Cancer Treatment Centre Bunker; and soils inspection for the four turbine 12 MW Summerside Wind Park. Donnie has been Fundy Engineering's Branch Manager in PEI since opening there in 2001. Because of his experience in materials testing, he also teaches courses at Holland College.

## George Thambi, MIE, PMP Engineering Technologist

*fluent in Malayalam and Hindi*



### Qualifications at a glance

- *B.Tech. Civil Engineering*, Mahatma Gandhi University, 2006
- *M.Eng.*, University of Windsor, 2009
- *MBA*, Indian Institute of Management, 2015
- *MIE*, India Institution of Engineers
- *Project Management Professional*, PMI®

**SPECIALTY AREAS:** AutoCAD, geotechnical investigations, materials testing, and project management

## Profile

George spent over ten years as a project manager in the construction of hospitals, roads, and information technology projects in India before coming to Canada. He has managed large, complex project by defining business needs with stakeholders, developing cross-functional relationships with internal and external resources, and maintaining common standard practices throughout the project lifecycle. George primarily works with our geotechnical department. He

has been involved with a variety of projects including the construction of a fish ladder on Bean Brook in east Saint John, conducting pre-blast surveys for dredging at North Head Wharf in Grand Manan, geotechnical surveys for the Burchill Wind Project in west Saint John, and several geotechnical investigations throughout New Brunswick.

## Rickey Wakelin, CTech Engineering Technologist, Clyde River

### Qualifications at a glance



- *Environmental Technician diploma*, Holland College, 2007
- *Certified Engineering Technologist*, ITP

**SPECIALTY AREAS:** materials testing, laboratory testing, and environmental site assessments

## Profile

Since starting at Fundy Engineering in the spring of 2016, Rickey has been involved with several geotechnical and environmental projects across Prince Edward Island. His geotechnical work has comprised asphalt and concrete testing on various construction projects and wharf inspections for Public Works and Government Services Canada. Rickey performed site inspection work during construction of the transmission and distribution mains for the Miltonvale Wellfield Phase II in Charlottetown. He has also conducted many Phase I Environmental Site Assessments and has assisted with several modified Phase I and Phase II ESAs.

# What People Are Saying About Us

## CLIENT TESTIMONIALS

### Frequent Multi-Services Client

"We have always enjoyed working together and respected your advice. Fundy's staff is more than willing to react to our immediate needs and have gone out of their way to change their schedule to meet ours – service is second to none!"

### Environmental Services Client

"We would like to compliment you on the professionalism and kindness of your staff. Your environmental team helped ease a very stressful situation for us! If anyone ever needs engineering services as we did, be assured we will recommend your firm."

### Environmental Services Company President

"I want to take this opportunity to thank you and the Fundy Engineering staff for your tireless effort in helping us put together what I believe to be an excellent application that we can all be proud of. Your support, professionalism, and dedicated involvement over the past year, will be long remembered. I look forward to our working together in the future."

### Local Medium-Sized Business Manager

"For years our office heating system was a nuisance to operate, but now that we have a modernized and controlled system designed by Fundy Engineering, we are more comfortable at work."

### Owner of an Historic Uptown Saint John Building

"Your staff did a truly amazing job at designing our modern mechanical systems so that they are camouflaged in with the historic elements of our historic building. This was a difficult task to achieve and your mechanical design team did it with professionalism."

### Electrical Services Client

"Upgrading the outdated electrical system in our warehouse was a complicated job, but Fundy Engineering was able to accomplish it on time and within budget thanks to their skilled and knowledgeable electrical engineering people."

### Local Developer

"Fundy Engineering ensured that rock blasting activities were done in a safe manner and all of our operations happened without any incidents."

### National Franchise

"It's extremely tough to find an ethical, responsive, and professional engineering firm that does good work – all qualities that Fundy Engineering exemplifies."

### Mechanical Systems Industrial Client

"Perfect changes! Thank you for catching up the intent of my notes and comments. I could not have asked for a better design partner than in you! The CAD models look stunning."

## CORPORATE REFERENCES

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## ADDITIONAL INFORMATION

If you require any additional information about Fundy Engineering, please contact our offices toll free at 1.877.635.1566 or visit us online at [www.fundyeng.com](http://www.fundyeng.com).



## FUNDY Engineering

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Fundy Engineering is proud to be one of the largest employee-owned boutique engineering-consulting companies headquartered in New Brunswick and serving Atlantic Canada and New England.

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🖱️ [www.fundyeng.com](http://www.fundyeng.com)

**FUNDY** Engineering

Thank you for considering our team for your engineering and consulting needs. We encourage you to visit our webpage and share your needs and concerns so that we can continue to provide you with top-quality technically sound solutions