



April 20, 2020

BOREAL WATER RESOURCES LTD.

Job Opportunity: Junior/Intermediate Hydrotechnical Engineer

Competition No.: 2002

Boreal Water Resources Ltd. (Boreal) is a specialist engineering design and project management firm focused on hydrological assessment, hydraulic design and renewable energy development. We provide practical solutions for water resource problems of all magnitudes and complexities. Our work is deeply rooted in the science of water and we employ innovative techniques and instrumentation to remain leaders in our field.

Founded in 2017, we are active across Western Canada and Latin America. Our client base includes independent power producers, mining companies, municipalities, land developers and First Nations. Our passion is rivers, lakes and coastal areas. We strive to provide effective, responsible solutions for our clients' projects.

THE OPPORTUNITY

We are seeking an experienced and enthusiastic Hydrotechnical Engineer based in Edmonton, Alberta. The successful candidate will work on a variety of hydrotechnical / water resources assignments, which may include:

- Peak flow analysis, flood hazard and inundation studies.
- Dam safety reviews, consequence classification, and related documentation.
- Water balance modeling for residential or industrial developments.
- Power and energy analysis for run-of-river hydro projects.
- Hydrological and environmental data collection and analysis, including instream flow measurement water quality and bathymetric survey.
- Hydraulic design of infrastructure, such as intakes, weirs, pipes/penstocks, diversions, culverts or erosion protection.
- Hydrodynamic/CFD modeling of effluent discharges, hydraulic structures, and natural channels.
- Research into novel hydrometric monitoring instrumentation, methodologies and techniques.
- Preparation of comprehensive watershed studies and project baseline assessments.

Boreal is a small, growing company and our staff participate in all aspects of the company's operations and future growth strategy. As such, the successful candidate will participate in and/or lead the following activities:

- Independently lead projects, including field programs.
- Identification of new business opportunities, including preparation of proposals, work plans and cost estimates.
- Management of contractors and sub-consultants, including preparation of contractual documents.



- Development and implementation of Boreal's corporate safety and quality programs.
- Build relationships with clients and represent Boreal at industry events and conferences.
- Preparation of successful applications for funding opportunities, both for Boreal innovations and clients' projects.
- Management of regulatory applications and other submissions, including negotiation of key conditions of approvals and authorizations.
- Professional sign-off of designs and studies, as well as professional review of the work of others.
- Research and development activities for novel technologies and/or techniques that can be applied to our work.

Exact work assignments will depend on the qualifications and interests of the successful candidate, as well as Boreal's active project workload.

YOUR QUALIFICATIONS

Our ideal candidate will have the following qualifications and competencies:

- Degree in Civil or Environmental Engineering with a specialization in Hydrotechnical / Water Resources Engineering.
- 1 to 5 years of relevant experience.
- Registration (or eligible for registration) as an Engineer-in-Training or Professional Engineer with APEGA or EGBC.
- Sound understanding of hydrological principles and hydraulic design theory.
- Demonstrated experience in the hydrotechnical / water resources assignments noted above.
- Experience with standard business software, especially MS Excel.
- Excellent communication, technical writing and presentation skills.
- A strong command of the English language, both oral and written.

Preferably, you would also have experience/competency in several of the following:

- Fluvial-geomorphological processes and models.
- Instrumentation used for hydrometric, bathymetric or meteorological data collection.
- Experience in the renewable power sector.
- Experience with some of the following software:
 - AutoCAD / Civil 3D
 - Hydrological models: HEC-HMS, Raven, GoldSim
 - Hydraulic models: HEC-RAS, FLOW-3D, ANSYS, Simsen, Bentley Hammer, HY-8
 - GIS platforms (QGIS, ArcGIS), including mapping, web maps, and analysis
 - Data management platforms, such as Aquarius Time Series.
 - Data analysis using Python or R.
- Safety certifications such as the following:
 - Standard First Aid / Wilderness First Aid
 - Pleasure Craft Operator / Small Vessel Operator Proficiency
 - MED A3 / SDV-BS
 - Swiftwater Rescue



- Fluency in Spanish is an asset.

In addition, you must be self-motivated, an independent problem-solver and attentive to details. You will also have enough flexibility in your schedule to be able to respond to project demands as they come about.

Exceptional candidates whose qualifications deviate from the above may be considered on a case-by-case basis.

WHAT WE OFFER

Boreal is offering competitive remuneration and a flexible working arrangement that can be tailored to suit your lifestyle. You will gain exposure to a variety of projects and industries and will be able to participate in future direction of a vibrant, young company.

In the near-term, this position will be a remote assignment meaning that you are free to work from wherever you see fit. When the current public health situation improves, work will be likely conducted primarily from Boreal's office.

For the right candidate, Boreal can accommodate a part-time work schedule or primarily remote assignment if that is your preference.

HOW TO APPLY

Applications will be accepted from now through May 11, 2020. Please respond via email at derek@borealresources.ca. Include your resume, references, and a brief description of why you are interested in this position.

We appreciate all applications received for this competition. However, only candidates selected for an interview will be contacted. Applications received may be used to fill future opportunities with Boreal Water Resources Ltd.