COLLÈGE AURORA COLLEGE

IDENTIFICATION

Department	Position Title	
Aurora College	Senior Aquatic Scientist	
Position Number	**Community**	**Division/Region**
91-17614	Yellowknife	Research

PURPOSE OF THE POSITION

The Senior Aquatic Scientist is accountable for providing authoritative scientific and strategic advice and overseeing the conceptualization, development, implementation, and evaluation of research programs, projects, and services at the North Slave Research Centre of the Aurora Research Institute (ARI). These actions lead to improved aquatic science knowledge in Aurora College that informs adaptation and mitigation efforts in response to the impacts of climate change on the natural environment.

SCOPE

The Senior Aquatic Scientist is located in Yellowknife and reports to the Vice President, Research at the ARI. The Aurora Research Institute is the research division of Aurora College. The Senior Aquatic Scientist is the ARI scientific authority and research leader in the aquatic sciences.

The Senior Aquatic Scientist is responsible for leading the work of the aquatic sciences research group at the North Slave Research Centre (NSRC) and ensuring that this work addresses the research and planning needs of Northwest Territories (NWT) governments and communities and the strategic direction of Aurora College. This includes the development, implementation, and ongoing adaptive management of a multi-year strategic and operational plan for aquatic research that informs Aurora College decision making and to ensure that risks to the NWT's natural environment are minimized. The Senior Aquatic Scientist provides leadership on major research initiatives that involve stakeholders both inside and outside the NWT.

The Senior Aquatic Scientist is often called upon by Government of the Northwest Territories (GNWT) departments and other NWT organizations to provide analysis and advice based on extensive scientific and technical knowledge. This informs and supports decision-making that facilitates and enables adaptation to, and mitigation of, the effects of climate change.

The Senior Aquatic Scientist also conducts research, remains current on advances in the aquatic sciences, seeks funding opportunities, and collaborates with external researchers on work of relevance to the NWT. Within this context, the Senior Aquatic Scientist has wide and varied relationships with: academic funding councils and associations (e.g., Natural Sciences and Engineering Research Council of Canada, Canadian Association of University Research Administrators); industry and government research agencies and organizations (e.g., Environmental Studies Research Fund, Industrial Research Assistance Program, Canada Foundation for Innovation, Polar Knowledge Canada); various federal science departments (e.g., Natural Resources Canada, Environment and Climate Change Canada), and territorial, provincial, Indigenous and municipal governments. The Senior Aquatic Scientist maintains regular contact with Indigenous governments and northern non-governmental organizations. The Senior Aquatic Scientist regularly works with the NT Geological Survey and the GNWT departments of Environment and Climate Change, Health and Social Services, and Municipal and Community Affairs.

The Senior Aquatic Scientist is regularly called upon to address or delegate local, national, and international media requests including written, oral, and video responses.

RESPONSIBILITIES

1. **Plan and participate in field-based research and monitoring programs.**
    - Lead or participate in field programs that involve the collection and analysis of water samples and associated aquatic information.
    - Coordinate research teams that may include external and community-based partners.
    - Collaborate with College faculty, students, and/or universities to facilitate, and in some cases oversee the field component of post-doctoral, graduate, and undergraduate research.
    - Direct or supervise project participants including volunteers and summer students.
    - Ensure that field programs are cost effective and efficient and that field safety plans are properly documented and adhered to.
    - Communicate the planning and results of field programs to a variety of stakeholders.

2. **Develop, implement, evaluate and adaptively manage long-term strategic and operational research initiatives.**
    - Develop and refine a long-term vision and mandates and create shorter-term (e.g., annual) operational goals and objectives to develop research capacity.
    - Research and investigate research-related opportunities with partners and stakeholders.
    - Represent Aurora College on international, federal, territorial/provincial academic committees that are developing programs in support of aquatic science research.
    - Work with Aurora College and GNWT department experts to evaluate and prioritize potential research initiatives and to incorporate these into strategic and business planning processes.
    - As manager of a highly skilled scientific research team, provide guidance on a broad range of aquatic science research activities.

- Direct, coordinate, and review complex aquatic science projects, including field research programs, to produce authoritative scientific reports.

3. Promote, develop and support partnership for priority research initiatives.

- Develop and cultivate positive and productive relationships with governments, research-funding agencies, and the private sector for developing, funding, and implementing research activities.
- Develop and cultivate positive and productive relationships with academic funding councils and associations.
- Source financial resources from potential funding agencies through partnerships and grants (both core and project funding opportunities).
- Negotiate funding or revenue-generating agreements or partnerships with funding agencies and address the related reporting requirements.
- Supervise graduate and undergraduate student research projects in conjunction with university staff.

4. Act as the Aurora College subject-matter expert in aquatic sciences and impacts to freshwaters from climate change and industrial activities.

- Provide advice and subject matter expertise to environmental regulators, consulting engineers, and project proponents to inform infrastructure development and land-use management decisions.
- Lead and participate in a variety of planning- and decision-making meetings and activities throughout the NWT.
- Utilize subject matter expertise to combine knowledge and data collected to identify existing and potential issues and to recommend possible mitigation measures.
- Develop and maintain extensive and current knowledge of national and international aquatic research and apply it to the NWT context.

5. Manage the human resources, financial, and administrative functions of the NSRC aquatic sciences research group to provide effective and efficient services within budgeted frameworks.

- Develop and implement annual work plans that establish short- and long-term objectives.
- Manage human resource functions within the group including staffing, direction setting, and performance evaluations.
- Manage the annual budget for the group ($200,000 O&M and external funds ranging between $500,000 and $1,000,000) and project future budget requirements in a fiscally responsible manner.
- Oversee contract management, including preparing terms of reference and statements of work to direct contractors.
- Develop objectives and performance indicators for the group including individual staff goals, ensuring they are complimentary to ARI goals and objectives.
- Provide positive leadership and advice to unit staff.
- Encourage employee development through performance appraisals, training plans, and professional development opportunities.

WORKING CONDITIONS

Physical Demands

The incumbent conducts summer and winter fieldwork. During the summer field season, the incumbent may hike over rough terrain with a backpack and collected samples (up to 50 pounds) for 8 hours per day, up to 3 weeks per year.

Environmental Conditions

While in the field, the incumbent may be exposed to: rapidly-changing weather; conditions such as cold (hypothermia), intense sun (burn), wind, and rain; helicopters, airplanes, ATVs, snowmobiles, and road vehicles (physical injury, noise fatigue, fumes from fuel); insects and insect bites; and dangerous, unforeseen, and uncontrolled field situations such as vehicular accidents, attack by wild animals, falls, and other accidents while travelling or on traverse (broken bones, cuts, etc.).

When in the lab, the scientist follows WHMIS and established QCQA lab protocols to limit exposure to hazardous substances, odors, fumes dust, dirt, and excessive noise.

Sensory Demands

No unusual demands.

Mental Demands

Duty travel requirements include travel by small aircraft and helicopters and travel in small water craft. During the winter field season, work may involve travelling by snowmobile, working at extreme cold temperatures, operating ice augers, and working alongside heavy machinery for up to 8 hours per day, up to 3 weeks per year.

The incumbent is also responsible for the continuous management of scientific and logistical activities and safe work practices while in the field, including the prediction and mitigation of potentially hazardous situations. These mental demands may occur up to six weeks per year.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of the scientific principles and techniques in aquatic science research and monitoring, including field-based data acquisition and analysis.
- Knowledge of and/or the ability to acquire and apply knowledge of the drivers that influence the physical, chemical and/or biological properties of lakes and streams, with specific focus on aquatic processes in the NWT and northern Canada.
- Knowledge of the linkages between: lakes, climate, and industrial activities; climate change impacts; adaptation strategies; and sound policy development, planning, and operational decision-making.
- Knowledge of the role of aquatic research in contributing to Aurora College objectives.
- Knowledge of and/or the ability to acquire and apply knowledge of the roles and needs of other College divisions, government departments and agencies.
- Knowledge of needs and issues of National and International research scientists working in the Northwest Territories.

- Knowledge of the legal and ethical obligations of the scientific profession.
- Ability to acquire knowledge of needs and issues of NWT Indigenous Governments, organizations and communities including sensitivity to Northern and cross cultural issues and concerns.
- Knowledge of financial planning, budgeting and administration systems.
- Awareness of the linkages between scientific research and the evidence-based decision-making processes employed by governments.
- Skills relating to fieldwork preparation and conducting efficient and safe field programs within prescribed budgets and timelines.
- Interpersonal skills and the ability to cultivate positive working relationships.
- Oral and written communication skills, including the ability to read, understand, and effectively communicate complex scientific ideas including methodologies and reports to professional audiences.
- Consensus-building skills to lead groups of diverse stakeholders in implementing science-based research and monitoring programs.
- Project management, organizational, and logistical skills to effectively manage and participate in independent and collaborative research projects.
- Skills in scientific writing, critical peer review, and editing of scientific reports and interpretations.
- Supervisory skills to oversee students, contractors, other staff, and field assistants.
- Field skills that are grounded in best practices in aquatic science research and monitoring.
- Presentation skills that result in effective communication with both scientific peers and laypersons.
- Ability to facilitate meetings and workshops.
- Ability to develop/build positive external and internal relationships and partnerships.
- Ability to identify strategic direction and conceptualize scientific collaborations in aquatic sciences.
- Ability to initiate, anticipate, shape and adapt to emerging opportunities.
- Ability to advocate and encourage scientific research of interest/concern to the NWT.
- Ability to deal with politically sensitive issues where a high degree of sensitivity, tact, and diplomacy are required.
- Ability to effectively interact with industry, government agencies, Indigenous organizations, and the public.
- Ability to resolve conflicts and differences of opinion.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:

A Master of Science degree in Biology, Chemistry, or Geography with a focus in the aquatic sciences supplemented by environmental geoscience or related sub-disciplines, and five (5) years of relevant experience including one (1) year of supervisory or team lead experience.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

Position Security

☐ No criminal records check required
☒ Position of Trust – criminal records check required
☐ Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

☐ French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
READING COMPREHENSION:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
WRITING SKILLS:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
☐ French preferred

Indigenous language: Select language

☐ Required
☐ Preferred