

CRC Research Technician STATEMENT OF QUALIFICATIONS

EDUCATION

Graduation from a recognized university with an acceptable B.Sc. or M.Sc. degree in physical sciences or engineering with specialization in hydrological or environmental sciences relevant to the duties of the position; or an acceptable combination of education, training and/or experience.

EXPERIENCE

Experience in

- conducting physically-based field studies at remote sites of surface and near surface hydrology, catchment water balance, surface energy balance.
- programming and launching Campbell dataloggers, energy and mass balance systems, eddy correlation systems.
- designing, constructing and installing hydrometeorological stations.
- Managing and maintaining computer systems for scientific data analysis, hydrological modelling, graphing and mapping,
- managing, editing, preparing, graphing, QA/QC and conducting basic analysis on datasets of environmental measurements

KNOWLEDGE

Knowledge of

- hydrological principles as they apply to cold regions processes, water balance, streamflow generation, including soil and snow hydrology.
- field, and laboratory techniques for hydrology, advanced Campbell datalogger systems control programming, and techniques to assess computer models used in estimating hydrology,
- Operation and maintenance of 4WD trucks, all terrain vehicles, skidoos in adverse conditions.

ABILITIES

Ability to

- plan, organize and implement short and long term investigations of hydrological processes, water balance and streamflow.
- Review, interpret and evaluate the appropriate scientific literature,
- detect inadequacies of existing knowledge and methodology,
- **produce cost and time estimates for field and modelling studies**
- **develop analysis and field protocols for CRC research programme**
- **apply recent advances in hydrological measurement, modelling and analysis**
- **design novel experimental techniques and approaches**
- **analyze and interpret data, report results, recommend action to be taken,**
- **help prepare manuscripts for publication in scientific journals**
- **conduct environmental impact investigations for proposed field studies**

- **provide advice and consultative services to other University researchers, departments and to government agencies in collaborative and outreach programmes,**
- make effective oral presentations on hydrology research programs to CRC students and staff, and to technical organisations.

PERSONAL SUITABILITY

- Effective interpersonal relations with multinational research teams,
- Effective communication and consultative skills.
- Initiative, creativity and sound judgement in decision making.

CONDITIONS OF EMPLOYMENT

- Valid driver's permit.
- Current first aid certification
- Willing to work for prolonged periods in the laboratory and in remote field locations and camps under less than ideal conditions (e.g., inclement weather).
- Willing to be away from home for several weeks at a time on work-related travel.
- Willing to travel by skidoo, all-terrain vehicle, boat, helicopter, ski, snowshoe as necessary to conduct field experiments.
- Must be willing to climb and install instrumentation on tall meteorological towers to conduct experiments.