

**Job Class Profile:**            **Biometrician**

**Pay Level:**                      **CG-42**                      **Pay Band:**                      **994-1037**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	7	5	2	4	7	6	6	4	2	
Points	327	83	13	19	210	130	124	86	21	1013

## JOB SUMMARY

The Biometrician provides biometric and statistical guidance and advice to biologists, ecologists and other staff conducting wildlife research. Work includes developing, maintaining and managing the computing and statistical services for the Wildlife division.

### Key and Periodic Activities

- Performs detailed statistical analysis and biological interpretation of scientific data collected by the Wildlife Division and presents results, internally and/or at conferences.
- Manages and coordinates the big game license return process, including supervising and coordinating data entry and hunter trend analysis and hunter trend reports.
- Assists biologists in the preparation of scientific papers for internal and external publications; involvement ranges from assistance with statistical approach to co-authorship of peer reviewed manuscripts, including relevant research, data analysis and writing.
- Develops and maintains extensive databases of wildlife related information which includes hunter return, telemetry, classification, morphometric, demographic and census information.
- Instructs staff on the use of statistical software programs and the proper use of statistics for biometrical and biological analysis.
- Advises senior staff on appropriate survey methodologies to implement.
- Population modeling (future projections) of big game species using population modeling programs.
- Co-ordinates and develops a response to public, outside stakeholder and intergovernmental request for statistical information on wildlife populations.
- Attends meetings with outside stakeholders, public and personnel from other governments departments to discuss/inform on Wildlife Division activities, policies and/or research.
- Prepares databases for GIS support group.
- Assists in field work activities such as moose/caribou census, caribou telemetry and classification surveys.

## SKILL

### Knowledge

#### General and Specific Knowledge:

- Advanced statistical methods and techniques and related computer software
- Database development and maintenance and software.
- Biological data and its interpretation.

**Formal Education and/or Certification(s):**

- Minimum: Masters Degree in Biometrics or Statistics or Biology/Ecology with a concentration in statistics.

**Years of Experience:**

- Minimum: 1 – 2 years

**Interpersonal Skills**

- A range of interpersonal skills such as listening, gathering and providing routine information occurs when dealing with employees and peers; communicating complex information and direction to others (i.e. Canonical correlation analysis from caribou data); providing expert advice or counselling to others such as to a Senior Biologist on best approaches and methodologies to use to solve problems, gather and analyze data; conducting interviews and training; facilitating meetings or sessions; making presentations and sometimes dealing with upset or angry people.
- Communications occur with employees within the immediate work area, department, other departments and outside organizations including co-workers, supervisor or manager and outside stakeholders.
- Most significant contacts are with other staff (Statistician, Data Entry Clerk); Senior Manager of Research; other departmental staff (i.e. Biologists) and co-workers.

**EFFORT**

**Physical Effort**

- The demands of the job occasionally result in considerable fatigue, requiring periods of rest.
- Lifting or moving objects less than 10 lbs. occurs occasionally. Lifting heavier objects does not apply.
- Work requires extended periods of sitting while operating a computer involving keyboard and mouse operation.
- Occasionally, walking, standing and driving are necessary to attend meetings, conduct presentations.

**Concentration**

- **Visual concentration** is a constant requirement when working on a computer for extended periods of time conducting statistical analysis to ensure proper techniques are being used and calculations are accurate. Also, writing, reading and editing reports and conducting research on methodologies.
- **Auditory concentration** is required when attending meetings, conversing on the telephone with general public and colleagues and during face-to-face interactions.
- Activities such as performing mathematical calculations and data analysis can be **repetitious and require alertness**.
- **Time pressures and deadlines** are experienced when having to conduct analysis and

<p>generate results with little lead time as well as data to be entered to report on the results of hunter returns for decisions to be made regarding quota levels for next season.</p> <ul style="list-style-type: none"> <li>— Usually there is <b>control over the pace of work</b>.</li> <li>— <b>Interruptions</b> are constant in the form of coworkers requesting advice on statistical analysis and data results, the public and other government employees seeking information.</li> <li>— <b>Exact results and precision</b> are constantly required when conducting statistical analysis and testing hypothesis.</li> </ul>
<p><b>Complexity</b></p>
<ul style="list-style-type: none"> <li>— Work tasks and activities are different and unrelated, requiring a broad range of skills and knowledge.</li> <li>— Work tasks and activities vary but include biometrics and statistical related duties and responsibilities including detailed statistical analysis and biological interpretation of scientific data; assisting in the preparation of scientific papers (i.e. statistical approach, co-authorship, relevant research, data analysis and writing); instructing staff regarding proper use of statistics for biometrical and biological analysis and population modelling.</li> <li>— The most typical challenge/problem is to determine the most appropriate statistical methodologies to implement; performing accurate statistical analysis and biological interpretation of scientific data and assisting in the preparation of scientific papers.</li> <li>— Reference material available includes previous work and methodologies used for similar problems, relevant research papers.</li> </ul>

## RESPONSIBILITY

<p><b>Accountability and Decision-Making</b></p>
<ul style="list-style-type: none"> <li>— Works tasks and activities are somewhat prescribed or controlled through annual work plans and project progress reports.</li> <li>— Can make decisions based on information without approval of Manager. Advise staff of specific data to enter, and allocate and prioritize tasks. Decides on the methodologies to use with respect to big game surveys, survey design, data collection and analysis.</li> <li>— Travel and annual leave would be approved by supervisor.</li> <li>— Act independently and exercise discretion and judgement in carrying out responsibilities and to interpret directions and apply guidelines. A high degree of discretion and judgement is exercised when determining which long term projects in which to focus in order to best meet divisional goals.</li> </ul>
<p><b>Impact</b></p>
<ul style="list-style-type: none"> <li>— Impacts are felt internally within the immediate work area/department/government as well as externally with clients (i.e. outfitters, tourism) and the general public (i.e. hunters).</li> <li>— Results directly impact processes and systems, information, finances, human resources, health and safety, corporate image and wildlife and the environment.</li> <li>— Work tasks and activities impact the decision-making process of Senior Managers regarding wildlife quota adjustments, licenses issued and wildlife resource management issues. Work involves the use of sound research methodologies and data analysis.</li> <li>— The consequences of a mistake or error can have a significant impact on all of the above,</li> </ul>

especially if quotas are cut and outfitters have to close down or if hunting is allowed to continue and the population is put at risk. Mistakes or errors result in inaccurate information/data being presented and used for management decision-making regarding wildlife and resource management activities.

- The risk or consequences of an error is not mitigated by detailed review and may not be detected.

#### **Development and Leadership of Others**

- Typically responsible for direct and ongoing bargaining unit supervisory activities for a small size work group of employees (1 to 4 employees).
- Performs both functional team leader and project leader roles for various special, short term and long term projects relating to database development, statistical analysis and monitoring programs.

### **WORKING CONDITIONS**

#### **Environmental Working Conditions**

- Safety equipment is not required.
- There is limited likelihood for injuries or illnesses resulting from hazards.
- Travel is required occasionally.
- Glare from computers is inherent.
- May occasionally be exposed to unusual or distracting noise, fumes, vibration, odours and adverse weather conditions when helping to conduct aerial surveys.