Job Class Profile: Ecosystem Management Ecologist

Pay Level: CG-43 Point Band: 1038-1081

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	7	6	3	5	7	6	6	3	4	
Points	327	100	19	24	210	130	124	64	43	1041

JOB SUMMARY

The Ecosystem Management Ecologist performs advanced professional work in formulating and implementing frameworks, including initiating projects, plans and strategies, to investigate and monitor biodiversity, species at risk, wildlife habitat and various wildlife species and to advise on their conservation, recovery and/or management.

Key and Periodic Activities

- Manages, implements, supports and monitors the recovery of species listed under the provincial Endangered Species Act focusing on rare plant species, either directly or in coordination with recovery teams, partners and stakeholders and other government managers and researchers. Co-chairs or participates on recovery teams and provides advice and guidance on issues related to species recovery.
- Identifies, manages and organizes the protection of critical and recovery habitat, including the creation of new critical habitat orders under the Endangered Species Act. Manages the consultation process with interest groups, landowners and others who may be affected by recovery actions.
- Develops and conducts various field inventories and research programs in association with research partners and in conjunction with data requirements for the General Status Program, Species Status Assessments and Species at Risk Conservation. Prioritizes target species, identifies research needs, initiates and organizes field surveys or other research projects, developing sampling protocols, conducting field surveys, supervising and directing field assistants and students, identifying and processing plant specimens, and data entry and analysis.
- Represents the Department at various conferences, meetings, workshops and seminars, and to meet with public interest groups and organizations to discuss plant, lichen and biodiversity conservation initiatives and policies adopted by the Department.
- Plans, designs, analyzes and conducts inventories related to habitat management, including the development, maintenance and analysis of database and spatial maps on sensitive wildlife areas and reserves within the province, including the preparation of reports, scientific publications and legal boundary description for designated areas.
- Provides professional GIS support to other projects and initiatives involving aspects of wildlife and habitat use.
- Reviews environmental assessment study proposals and makes recommendations on terms of reference. Recommends, coordinates and monitors within the various ecosystem management

Key and Periodic Activities
and referral processes such as environmental assessment, crown lands, mines and energy, guidelines which will protect or enhance wildlife species and/or habitat. — Reviews proposals and projects which may impact rare, threatened or endangered species, biodiversity and/or wildlife habitat and provides recommendations as to whether the project should be released including the formulation of conditions or mitigations required for release of the project. — Compiles and disseminates information on plant and lichen species of conservation concern including providing expert advice to others, creating maps of plant distribution, serving as contact point for others to report species of conservation concern or invasive species threatening plant biodiversity, and ensuring that new information is communicated to the data managers and other appropriate individuals. — Serves as Provincial representative on national committees and working groups, such as the Recovery of Nationally Endangered Wildlife (RENEW) working group. — Directs and supervises contract staff and students as required. — Complete year end annual reports, budget proposals, cost-shared proposals and work plans.

SKILL

Knowledge
General and Specific Knowledge: — Knowledge of research methods, statistical analysis, GIS and other software applications — Knowledge of current ecological and biological theory — Knowledge of Province's ecosystems, rare and endangered plant and lichen species and their ecology — Knowledge of project management **Formal Education and/or Certification(s):** — Minimum: Masters degree in biological sciences (Biology, Ecology)(Preferred) or a BSc. undergraduate degree in Biological Sciences with emphasis on ecology and wildlife science with significantly more experience. **Years of Experience:** — Minimum: with Masters 2-3 years; with BSc 4-5 years **Competencies:** — Research and analytical skills — Project Management skills — Computer skills especially related to GIS
Interpersonal Skills
— A range of interpersonal skills are used including listening to information from others, asking questions to get information, providing routine information and direction to others, gaining the cooperation of others to complete work and solve problems, communicating complex/specialized information and direction to others and providing expert advice to others. — Most important skills are gaining the cooperation of others, listening and communicating

complex ideas and information, negotiating contracts and agreements, providing expert advice/recommendations, mentoring/coaching, facilitating and problem solving skills.

— Communications occur often with employees within immediate work area, other employees/peers in the department and managers and with professional advisors. Less frequent communications occur with Municipal, Provincial or Federal government representatives, government employees or peers in other departments, students, academics general public and interest groups, project partners and Executive.

— Most significant contacts are with supervisors/managers to provide information to feed into policy and legislation and to get direction on priorities and solve problems; project partners who supply funding or expertise for research and management programs; and employees in the immediate work area for sharing of information and resources.

EFFORT

Physical Effort

— Occasionally the requirements of the job result in considerable fatigue, requiring periods of rest.

— Occasionally lifts heavy objects 25-50 pounds in the performance of field work.

— Required to sit at a computer for prolonged periods of time to prepare reports, analyze and maintain data, prepare maps and complex spreadsheets and to read or drive; stand regularly to make presentations; and walk or hike and climb occasionally while in the field especially during the summers.

— Fine finger or precision work is required when cutting and positioning tools.

— Occasional field work requires heavy physical exertion, gross motor skills and physical balance (i.e. paddling canoes, walking over uneven or slippery surfaces and climbing along edges of cliffs), using machinery and equipment requiring controlled movement such as microscope, cutting and positioning tools, walking/climbing over rough terrain and awkward or cramped positions or body movement to conduct samples or search for species.

Concentration

— **Visual** concentration is required when staring at a computer screen to write reports and correspondence, perform calculations and analysis, examine photographs and maps, spreadsheets and data files, enter datasets and use a magnifying glass and microscope to view small details that are hard to focus.

— **Auditory** concentration is required when exchanging information, listening to stakeholders in meetings, using the telephone for long periods, listening to cell/satellite phone in areas of poor reception, conducting bird or mammal surveys.

— Other **sensory demands** include smell and touch to help identify some plants and animals.

— There is **repetition requiring alertness** in digitizing data and doing calculations. Also, there is a need for alertness in the field for safety when working in remote locations.

— **Time pressures** include field work and survey work that must be completed during the appropriate seasonal window, year end budgetary deadlines; reports must be completed in time for regular management meetings or presentation dates; provincially legislated deadlines for environmental assessment processes and species recovery plans. As well if there are immediate threats to an endangered species they have to be given priority and mitigation

measures activated.

— There are regular **interruptions** due to weather conditions, difficulties with locating and collecting specimens; requests for information or consultation meetings with stakeholders; phone calls.

— Generally there is **control over the work pace** of regular work. Unexpected or high priority external influences can affect degree of control.

— **Higher than normal levels of attentiveness or alertness** are required when: in the field to pay attention to ensure the safety and comfort of students and field assistants from environmental, terrain and wildlife dangers.

— **Eye/hand coordination** is required in computer/keyboard work, microscope work, use of dissection equipment and use of hand lenses and digital callipers.

— There is a need for **precision and accuracy** when describing details of plants to be able to distinguish between similar species, taking field and laboratory measurements, performing calculations, working with maps, entering and analyzing statistical data.

Complexity

— Tasks at times are different but related allowing the use of similar skills and knowledge. However, there are regular tasks that are different and unrelated involving a vide variety of responsibilities and situations which could have a limited number or no guidelines or procedures. Tasks are regularly highly technical and have strategic or policy significance.

— Problems are occasionally well defined and which can be addressed by following procedures or guidelines.

— Occasionally problems have limited opportunity for standardized solutions, however more likely issues must be defined, require problem definition and analysis and solutions found or developed. Research and literature review are often required.

— Examples of typical problems or challenges are related to planning, organizing and implementing a survey for a particular plant species requiring research, identifying potential habitat and budgeting and logistics. Other typical challenges are trying to resolve concerns or demands of resource users, species users and habitat users in order to prevent a species from further endangerment of extinction; and issues revolving around coordinating and gaining cooperation of others.

— Reference material to assist in solving problems includes primary scientific literature, academics, senior professional staff, Endangered Species Act, other legislation, and policies.

RESPONSIBILITY

Accountability and Decision-Making

— Work is somewhat to generally prescribed and controlled with considerable latitude for independence.

— Operates relatively independently in setting recovery and field work priorities; determining research project design and survey procedures; purchasing goods and services up to $500; contact potential partners for projects; and setting activities of summer students and contractual employees.

— Requires formal approval for the submission of final recovery and management plans to the Minister; to purchase goods over $500; and to set final cost-shared project commitments.

— Some discretion is exercised within predetermined limits and procedures to set priorities and plan which projects and trips to conduct, which staff to take/assign and what equipment to purchase and advise government on the most effective recovery actions. Judgement is exercised in balancing competing priorities and species and choosing projects for funding.
— A high degree of independent discretion and judgement is exercised when developing and recommending mitigation measures and conditions for developments; when developing the division's position on critical recovery habitat; and when representing the Division at meetings with the public and dealing with unexpected situations where there are no guidelines.

Impact

— Decisions and/or work activities have impact both internally and externally to the organization, within immediate work area, with clients, customers and the general public and the wildlife/natural resources of the province.
— Results impact processes and systems, information (reports/data, legislation regarding wildlife endangered species/species at risk management), finances (research funding, development proposals and related economic activity), material and human resources (project partners), facilities (laboratory), health and safety (ecosystems, field staff) and corporate image (based on effectiveness of stewardship programs).
— Quality of information, advice and recommendations impact on biodiversity, wildlife and forestry resource management policy and programs, such as species management and conservation plans, forest management plans, protection and recovery plans, industrial economic development.
— In the event of a mistake or error the consequences are directly felt within the immediate work area, department, outside the department and the government, on clients, industry and resource users, ecosystem integrity (species becomes extinct) and the general public. Mistakes may be subtle, complex and difficult to detect or take months or years to identify.

Development and Leadership of Others

— There is no ongoing supervision of staff.
— Performs a team lead and project lead role on recovery teams, field research, laboratory and data collection work. Organizes and coordinates the work of field crews, students and contractors, and cost-shared partners.

WORKING CONDITIONS

Environmental Working Conditions

— Considerable amount of time is spent in the office however have a field component which requires specialized training such as firearms safety and use for bear protection, an advanced wilderness and remote first aid course, a climbing course, a transportation of dangerous goods course in addition to remote and wilderness hiking, canoeing and backpacking skills. Must also wear appropriate clothing, gear, equipment, and follow safety procedures when in the field and/or laboratory.
— Likelihood of minor cuts, bruises and fractures is moderate and more serious injury/illness is limited.
— Occasionally exposed to glare, dirt and dust, fumes, hazardous chemicals, toxic or poisonous

substances, bodily fluids and waste, infectious disease, odours, dangerous heights or depths, wet or slippery surfaces, physical dangers, sharp objects, adverse weather conditions, travel, lack of privacy and temperature extremes while engaged in field and laboratory work.