

**Job Class Profile: Cartographic Technician II (Draughting)****Pay Level: CG-26 Point Band: 490-533**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	4	2	4	6	3	3	3	1	2	
Points	187	33	25	29	90	65	62	21	21	533

**JOB SUMMARY**

The Cartographic Technician II (Draughting), performs work in the digitization of forest stands and other information from aerial photos and other source documents into Geographic Information System (GIS) database layers. The process involves the creation of digital orthophotos from aerial photographs, digitization of forest stands and other information from aerial photos and other source documents into GIS database layers, compilation into a standardized format and quality control of the resulting database layers.

**Key and Periodic Activities**

- Digitizes forest inventory data - transcribes (digitizes) interpreted forest inventory features (forest stands) from digital orthophotos and other source documents into (draft) interim GIS database layers. Utilizes a variety of software and computer applications such as Arcview, ArcGIS and R2V.
- Carries out quality control on GIS layers and databases - visually inspects digital map products against aerial photos and manuscripts to ensure accuracy and completeness of line work and attributes and performs edits as needed; ensures exact uniformity of geographic features between adjoining photos and map sheets; undertakes a variety of quality control procedures to ensure a high degree of accuracy and standard of digital map layers.
- Constructs final standardized digital forest inventory GIS database layers from interim (draft) layers.
- Creates digital orthophotos from aerial photos utilizing specialized software (PCI Geomatica, ArcGIS) and skill in photogrammetry along with specialized data sources such as Digital Elevation Models and Inertia Measurement Unit.
- Enters forest stand information into the GIS Database - using an on-screen map application in conjunction with the air photo, selects valid attributes with the mouse. Locates the applicable stand on the air photo and matches it with the correct polygon on the screen. Assigns the correct forest stand attributes to each polygon from the menu.
- Scans air photos for use in the creation of orthophotos.
- Completes log books.

## SKILL

### Knowledge

#### General and Specific Knowledge:

- Photogrammetry related software and applications.
- GIS applications software.

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

- Minimum: 2 Year Diploma in Forestry Technology supplemented by GIS courses, or Diploma in Computerized Mapping, or Geographic Information Systems

#### Years of Experience:

- Minimum: 1-2 years.

### Interpersonal Skills

- Interpersonal skills are used mainly to receive instructions and obtain clarification on data, solve problems, provide routine information and co-operate with others in a team environment.
- There is some contact with other government employees outside the department, students and departmental executives.
- Most significant interactions are with employees and supervisor in the immediate work area, division, and department and with professional/technical advisors.

## EFFORT

### Physical Effort

- Work activities requires constant sitting at a computer for extended periods using a mouse and keyboard to digitize forest inventory data.
- Requires fine finger precision inputting line work and forest attributes.

### Concentration

- **Visual** concentration or alertness is required while digitizing features of photos into digital GIS layers and while inspecting work for Quality Control.
- There are some time pressures and interruptions.
- **Exact results and precision and eye/hand coordination** are also required when digitizing photos and inspecting work.

### Complexity

- Tasks are regularly repetitive/well defined or different but related and allow for the use of similar skills and knowledge.
- Typically, work is performed with defined and standard work processes, have obvious or limited solutions and/or can be addressed by following procedures or guidelines.
- There are also regular challenges or problems that must be defined and practical solutions found.
- Manuals, user guides, computer support and specialized staff are available as references or resources.

## RESPONSIBILITY

### Accountability and Decision-Making

- Work tasks are highly monitored or controlled.
- Can make minor changes to input data to ensure efficiency of the process without changing the procedures of the mapping process.
- Cannot purchase without supervisor's approval.

### Impact

- There are various quality controls in place, both computer and human.
- Results are directly felt within the immediate work area. Errors have a moderate impact and when found are corrected in the work area.
- Consequences of errors are felt on processes and systems, information and human resources.

### Development and Leadership of Others

- Not responsible for the supervision of staff.
- Participates in orientation and mentoring/advising new staff on specific steps of the process.

## WORKING CONDITIONS

### Environmental Working Conditions

- The likelihood of injury or illness does not apply.
- There are limited adverse working conditions from computer screen glare and open office environment.