

Soil Scientists

A guide for newcomers to British Columbia



Contents

1. Working as a Soil Scientist [NOC 21109]	2
2. Skills, Education and Experience	5
3. Finding Jobs.....	7
4. Applying for a Job.....	10
5. Getting Help from Industry Sources	11

1. Working as a Soil Scientist [NOC 2021: 21109/ NOC 2016: 2115]

Job Description

Soil scientists conduct research into the composition, distribution and changing nature of soils.

As a soil scientist you do the following:

- Collect and analyze data
- Conduct research in laboratory and field settings
- Monitor industrial activities to ensure environmental regulation
- Plan and implement land development and reclamation plans
- Assist in technology development
- Conduct assessments
- Write reports
- Classify soil and prepare soil maps

Industry Overview

Soil scientists are part of the larger occupational group of physical science professionals. With accreditation and registration you may also be called an Agrologist in the province of BC. Soil science is considered a specialization within the field of agrology.

Soil Science offers career opportunities in a range of sectors including:

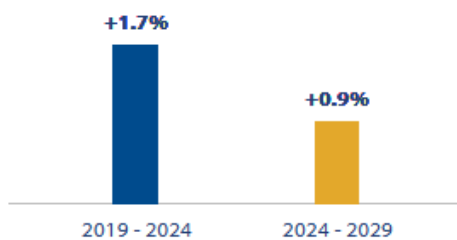
- Agriculture
- Forestry
- Environmental assessment and land use
- Mining and oil & gas industries
- Researcher for government or educational institutions

Sources: BC Institute of Agrologists, <https://www.bcia.com/> and Canadian Society of Soil Science <https://csss.ca/>

Job Outlook in BC

Physical Science Professionals

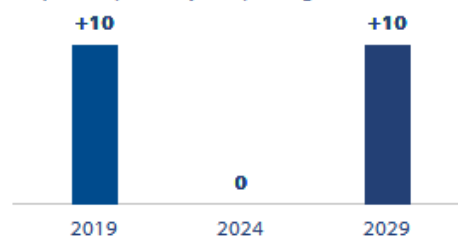
Forecasted average employment growth rate



Source: B.C. Labour Market Outlook

Job openings

10 year expected job openings: **60**



Source: B.C. Labour Market Outlook

Composition of job openings

Replacement of retiring workers:

50.0%

30 openings



New jobs due to economic growth:

50.0%

30 openings

Source: B.C. Labour Market Outlook

Chart from WorkBC

WorkBC provides the regional employment outlook for *Other Professional Occupations in Physical Sciences*, which includes *soil scientists*, from 2019-2029:

Region	Employment in 2019	Average Annual Employment Growth	Expected Number of Job Openings 2019-2029
Vancouver Island	50	-0.4%	0
Lower Mainland / Southwest	100	1.4%	30
Cariboo	30	2.9%	10

You can learn more about working as a soil scientist from:

- **WorkBC, Career Profile**
<https://www.workbc.ca/career-profiles/other-professional-occupations-physical-sciences>
- **ECO Canada, Career Profile: Soil Scientist**
<https://www.eco.ca/career-profiles/soil-scientist/>
- **Career Cruising** (Profile for Agronomist)
Available from the VPL Digital Library
<https://www.vpl.ca/digital-library/career-cruising/>

Types of Employers

Soil scientists are employed by:

- Federal, provincial and municipal government departments
- many industries including agriculture, forestry, oil & gas, mining
- environmental consulting and management companies
- universities, colleges and research institutes
- conservation agencies

You may also be self-employed and work as an independent consultant.

Salary

The annual median salary for Other Professional Occupations in Physical Sciences (including Soil Scientists) in BC is \$89,512.

Your salary depends on your area of specialization, experience, employer, and level of education. If you have a Master's degree or PhD you generally earn a higher salary than if you only have a bachelor degree.

Sources: WorkBC and Career Cruising

Working Hours

Most soil scientists work 40 hours a week. However, you may occasionally be required to work evenings and weekends when special inspections or studies of sites must be done.

You may have to travel in order to conduct fieldwork, taking soil samples for further study.

2. Skills, Education and Experience

Skills

- Strong written and oral communication skills
- Project and financial management
- Making presentations
- Problem-solving skills
- An aptitude for science
- Organized
- Detail-oriented
- Able to work well individually and as part of a team

Education and Experience

- A diploma or bachelor's degree in a science, resource or agricultural discipline is required
- A master's degree or PhD in soil science may be required
- Familiarity with Canadian soil classification types is helpful

Qualifications

The occupation Agrologist is regulated in British Columbia.

Although it is not mandatory to become certified in order to work as a soil scientist in BC, you may choose to apply for professional status through registration with the *British Columbia Institute of Agrologists (BCIA)*. There are two registration streams: *Professional Agrologist (PAg)* or *Technical Agrologist (TAg)*.

To become a *Professional Agrologist* you must have:

- completed a four year Bachelors degree with a required number of courses related to agrology
- completed the Articling Agrologist Program (which involves participating in a number of events and activities and completing milestones)

To become a *Technical Agrologist* you must have:

- A minimum of a diploma applied degree or degree with a science focus from an accredited post-secondary institution, with a required number of courses related to agrology
- completed the Articling Agrologist Program

For more information:

- **British Columbia Institute of Agrologists (BCIA)**
<https://www.bcia.com/registrants/requirements>

Internationally Trained Soil Scientists

If you are an internationally trained soil scientist and want to become a member of the British Columbia Institute of Agrologists you are required to have your credentials evaluated by:

- **International Credential Evaluation Services (ICES)**

<https://www.bcit.ca/ices/>

Ask for the normal or basic assessment, as required by the BC Institute of Agrologists.

Many soil scientists trained outside of Canada are still having difficulty finding jobs even with the demand in the agrology sector. The main issue is lack of hands-on experience with BC's agriculture and resource industries.

The BC Institute of Agrologists recommends that soil scientists new to Canada first search for work in a lab with a senior agrologist to gain experience with BC's soil and local issues.

You can learn more about qualifying to work as an agrologist from:

- **BC Institute of Agrologists**

<https://www.bcia.com>

3. Finding Jobs

You'll find job advertisements in local newspapers, trade journals, and electronic sources, as well as through professional association publications.

Local Newspapers

You can look at the *Vancouver Sun* & *The Province* at Vancouver Public Library for free. Check the job postings daily and the careers section in the *Vancouver Sun* on Wednesdays and Saturdays and in *The Province* on Sundays.

Online Job Postings

- **BC Public Service Job Opportunities**

<https://www2.gov.bc.ca/gov/content/careers-myhr/job-seekers>

Search for positions with the BC Government under the category 'Scientific & Technical'

- **Agricultural Labour Pool**

<http://www.agri-labourpool.com/>

- **ECO Canada Job Board**

<https://eco.ca/new-practitioners/employment-support/job-board/#/>

- **Indeed.com**

https://ca.indeed.com/advanced_search

Professional Associations' Career Resources

- **British Columbia Institute of Agrologists**

<https://www.bcia.com/employment>

- **Pacific Regional Society of Soil Science Job Postings**

<https://www.prsss.ca/category/news/job-postings/>

- **Canadian Society of Soil Science Opportunities**

<https://csss.ca/opportunities/>

Identifying the Right Position

When you browse job advertisements, you will find a range of different job titles that may be relevant.

For Soil Scientists, look for these related titles:

- Agrologist
- Agronomist
- Land-use specialist
- Resource manager
- Soil technician

Creating a List of Potential Employers

You can use directories to produce lists of employers. Contact them directly to find out if they're hiring. (Many large engineering firms have a soil or agriculture department.)

- **Business in Vancouver. Book of Lists.** (Biggest Engineering Firms in BC)
Available at the Central Library, 338.9711 B97b AND online at
<https://biv.com/lists>
- **Association of Consulting Engineer Companies British Columbia**
<https://acec-bc.ca/membership/>
- **Reference Canada**
<https://www.vpl.ca/digital-library/reference-canada>

Click on "Start Search" beside Canadian Businesses, then select the "Advanced Search" button. Select both "Keyword/SIC/NAICS" under Business Type and "City" under Geography. In the top search box enter "SOIL" and click SEARCH. Select the appropriate headings. Lower down, select the Province, choose the cities, and click the "View Results" button.

Available from the VPL Digital Library

NOTE: *You can access this database from a Library computer. If you are using a computer from outside the Library, you will need a Vancouver Public Library card to login to this database. After clicking on the database name, you will be asked to enter your library card number and PIN (usually last four digits of your telephone number).*

4. Applying for a Job

In Canada, employers usually expect to receive a resume or curriculum vitae and a cover letter that identifies the position you are applying for and summarizes your relevant experience.

Use the library catalogue, <https://vpl.bibliocommons.com/> to find books on writing resumes and cover letters specific to your industry.

To learn about applying for jobs in Canada, use the following guides which are available in print at the Central Library or online at <https://www.vpl.ca/siic/>.

- **Writing Resumes and Cover Letters**
<https://www.vpl.ca/siic/guide/job-search-resources/writing-resumes-and-cover-letters>
- **Getting Canadian Work Experience**
<https://www.vpl.ca/siic/guide/job-search-resources/getting-canadian-work-experience>
- **Networking for Employment**
<https://www.vpl.ca/siic/guide/job-search-resources/networking-for-employment>
- **Learn More About Working in BC and Canada**
<https://www.vpl.ca/siic/guide/job-search-resources/learn-more-about-working-in-bc-and-canada>

5. Getting Help from Industry Sources

Industry Associations

Associations for soil scientists and agrologists in BC and Canada provide information and assistance. Registration and fees are usually required for membership.

- **Agri-food Innovation Council (AIC)**
<https://www.aic.ca/>
- **British Columbia Institute of Agrologists (BCIA)**
<https://www.bcia.com/>
- **Canadian Society of Agronomy (CSA)**
<https://agronomycanada.com/>
- **Canadian Society of Soil Science (CSSS)**
<https://csss.ca/>
- **Pacific Regional Society of Soil Science (PRSSS)**
<https://www.prsss.ca/>
- **ECO Canada**
<https://eco.ca/>

Industry Journals

Search the Vancouver Public Library catalogue for journals related to your profession. Examples include:

- **Canadian Journal of Soil Science**
<https://cdnsiencepub.com/journal/cjss>

***Questions? Please ask the Information Staff in the Central Branch,
Vancouver Public Library or telephone 604-331-3603.***

Please note that the information in this guide is also available online through the Skilled Immigrant InfoCentre website at <https://www.vpl.ca/siic>