

BC COMPETENCIES ONLY

SKILLED**TRADES**^{BC}

PROGRAM OUTLINE

Water Well Driller

Implementation Date: August 1, 2026

The latest version of this document is available in PDF format on the SkilledTradesBC website
www.skilledtradesbc.ca

To order printed copies of Program Outlines
or learning resources (where available)
for BC trades contact:

Crown Publications, King's Printer
Web: www.crownpub.bc.ca
Email: crownpub@gov.bc.ca
Toll Free 1 800 663-6105

Copyright © 2026 SkilledTradesBC

This publication may not be modified in any way without permission of SkilledTradesBC

WATER WELL DRILLER PROGRAM OUTLINE

**APPROVED BY INDUSTRY
MAY 2026**

IMPLEMENTATION BEGINNING AUGUST 1, 2026

**Developed by
SkilledTradesBC
Province of British Columbia**

TABLE OF CONTENTS

Section 1 INTRODUCTION.....	3
Foreword.....	4
Acknowledgements.....	5
How to Use this Document.....	6
Section 2 PROGRAM OVERVIEW	7
Program Credentialing Model.....	8
Occupational Analysis Chart.....	10
Section 3 PROGRAM CONTENT.....	13
Reference Materials.....	20

Section 1

INTRODUCTION

Water Well Driller

Foreword

A Program Outline is a SkilledTradesBC Program Standards communication tool. It reflects the scope of knowledge and skills required to competently perform an occupation anywhere in BC.

All SkilledTradesBC assessment tools are designed to measure achievement of the competencies and learning tasks described by the Program Outline for an occupation.

The Program Outline informs industry, the public, employers and challengers of the occupation's requirements for certification, including:

- The Program Credentialling Model
- General Areas of Competence (GACs) and specific competencies required by individuals to perform proficiently in this occupation
- Learning tasks and content that must be mastered in order for an individual to be deemed competent

SAFETY ADVISORY

Be advised that references to the WorkSafe BC safety regulations contained within these materials do not/may not reflect the most recent Occupational Health and Safety Regulation (the current Standards and Regulation in BC can be obtained on the following website: <http://www.worksafebc.com>). Please note that it is always the responsibility of any person using these materials to inform themselves about the Occupational Health and Safety Regulation pertaining to their work.

Acknowledgements

Industry and Instructor Subject Matter Experts retained to assist in the development and review of this Program Outline:

- John Vlcek British Columbia Ground Water Association
- Thomas Williams British Columbia Ground Water Association
- Shawn Slade Drillwell Enterprises Ltd.
- Chris Bain Cariboo Water Wells

SkilledTradesBC would like to acknowledge the dedication and hard work of all the industry representatives appointed to identify the training requirements of the Water Well Driller occupation.

How to Use this Document

This Program Outline has been developed for the use of individuals from several different audiences. The table below describes how each section can be used by each intended audience.

Section	Training Providers	Employers/ Sponsors	Apprentices	Challengers
Program Credentialing Model	Communicates program length and structure, and all pathways to completion	Illustrates the length and structure of the program	Illustrates the length and structure of the program, and pathway to completion	Illustrates the challenger pathway to Certificate of Qualification
OAC	Communicates the competencies that industry has defined as representing the scope of the occupation	Displays the competencies that an apprentice is expected to demonstrate in order to achieve certification	Displays the competencies apprentices will achieve as a result of program completion	Displays the competencies challengers must demonstrate in order to challenge the program
Program Content	Defines the objectives, learning tasks, high level content that must be covered for each competency, as well as defining observable, measurable achievement criteria for objectives with a practical component	Identifies detailed program content and performance expectations for competencies with a practical component; may be used as a checklist prior to signing a recommendation for certification (RFC) for an apprentice	Provides detailed information on program content and performance expectations for demonstrating competency	Allows individual to check program content areas against their own knowledge and performance expectations against their own skill levels

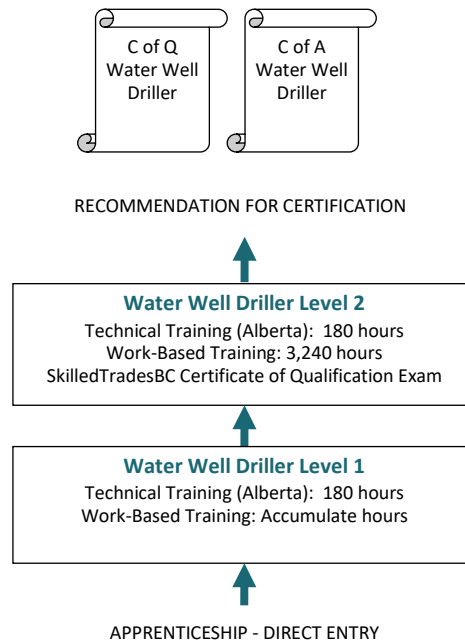
Section 2
PROGRAM OVERVIEW
Water Well Driller

Program Credentialing Model

APPRENTICESHIP PATHWAY

This graphic provides an overview of the Water Well Driller apprenticeship pathway.

*C of Q = Certificate of Qualification
C of A = Certificate of Apprenticeship
WBT = Work-Based Training*

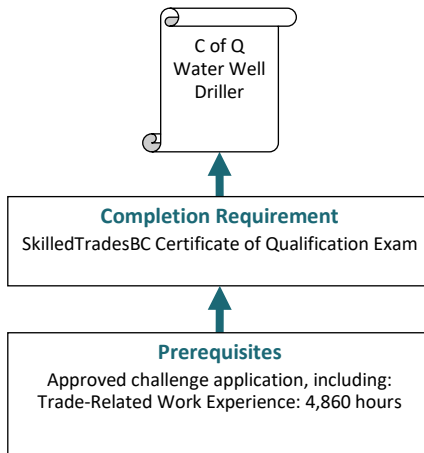


CROSS-PROGRAM CREDITS
None

CHALLENGE PATHWAY

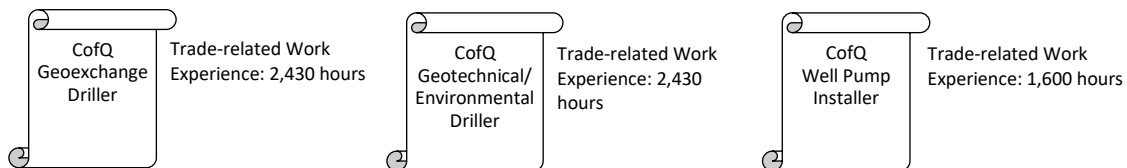
This graphic provides an overview of the Water Well Driller challenge pathway.

C of Q = Certificate of Qualification



CREDIT FOR PRIOR LEARNING

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program



Occupational Analysis Chart

WATER WELL DRILLER

Occupation Description: “Water Well Driller” refers to a person who sets up and operates mobile equipment used to drill residential commercial and industrial water wells. In addition, they conduct other types of industrial drilling. They must know the geological formations of the area where they are working to find potable water that is clean and safe for drinking. They may assist customers in selecting a drilling site and estimating the cost. Water Well Drillers re-construct, re-develop and disinfect older and contaminated wells and water-pumping systems.

STANDARD WORKPLACE SAFETY AND REGULATIONS A	Safety legislation, regulations & industry policy in the trades A1 1	Climbing, lifting, rigging and hoisting A2 1	Hazardous materials & fire protection A3 1	Water well and geothermal industry roles and associations A4 1	Trade specific regulations (Alberta) A5 1	Trade specific safety A6 1	
	Standards and regulations A7 1	Business practices A8 1	Trade specific regulations (BC) BC Only A9 				
ENGINE AND SUPPORT SYSTEMS B	Powertrains B1 1	Cooling systems B2 1	Lubrication systems B3 1	Fuel supply systems B4 1	DC electrical systems and equipment B5 1	Batteries B6 1	
	Brake systems B7 1	Service schedules B8 1	Hand and power tools B9 1				

**Section 2
Program Overview**

HYDRAULICS
C

Hydraulic systems				
				C1
1				

WELDING
D

Metal heating and cutting				
				D1
1				

Arc welding				
				D2
1				

DRILLING SYSTEMS
E

Compressed air systems				
				E1
1				

Drilling safety				
				E2
1				

Drilling fluids				
				E3
1				

Cable tool drilling				
				E4
1				

Rotary and air hammer drilling				
				E5
1				

Auger and boring drilling				
				E6
1				

Specialized drilling systems				
				E7
1				

Sonic drilling				
BC ONLY				E8

GROUND WATER
F

Ground water geology				
				F1
	2			

Water sources				
				F2
	2			

Lithology				
				F3
	2			

Maps				
				F4
	2			

Ground water exploration				
				F5
	2			

Aquifer characteristics				
				F6
	2			

Ground water chemistry				
				F7
	2			

Water well regulations				
				F8
	2			

Coastal drilling applications				
BC ONLY				F9

Maps (G Wells)				
BC ONLY				F10

**Section 2
Program Overview**

WATER WELLS G	Water well design G1	Well development G2	Well maintenance and rehabilitation G3	Water well/bore hole decommissioning G4	Ground water monitoring G5	Artesian wells G6
	2	2	2	2	2	
WATER WELL PUMPING SYSTEMS H	Pump types, applications and installations H1	Pump maintenance and diagnosis H2	Pump electrical procedures H3	Electrical and plumbing regulations H4		
	2	2	2	BC ONLY		
WORKPLACE COACHING SKILLS I	Workplace coaching skills I1					
	2					

**Section 3
PROGRAM CONTENT
Water Well Driller**

Line (GAC): A STANDARD WORKPLACE SAFETY AND REGULATIONS**Competency: A9 Trade Specific Regulations in BC****Objectives**

To be competent in this area, the individual must be able to:

- Demonstrate the application of WorkSafeBC's regulation and code
- Describe the sponsor's and employees' role with WorkSafeBC and fire regulations

LEARNING TASKS

1. Demonstrate the application of WorkSafeBC regulation and code
2. Describe the sponsor's and employees' role with WorkSafeBC and fire regulations

CONTENT

- Fall protection
- Crane safety
- Rights and responsibilities
- Fire extinguishers

Line (GAC): E DRILLING SYSTEMS

Competency: E8 Sonic Drilling

Objectives

To be competent in this area, the individual must be able to:

- Describe the terminology and equipment used for sonic drilling
- Explain the principles of operation of sonic drilling systems

LEARNING TASKS

1. Describe the terminology and equipment used for sonic drilling

2. Explain the principles of operation of sonic drilling systems

CONTENT

- Drill casing
- Drill rods
- Drilling procedure
 - Oscillation
- Safety
- Oscillation
- Core recovery
- Fluid circulation

Line (GAC): F **GROUND WATER**
Competency: F9 **Coastal Drilling Applications**

Objectives

To be competent in this area, the individual must be able to:

- Describe coastal hydrology and drilling applications
- Describe procedures and regulations for drilling in coastal areas

LEARNING TASKS

1. Describe coastal hydrology

2. Describe the procedure for drilling in coastal regions

CONTENT

- Water level
- Geological considerations

- Safety
- Tools and equipment
- Regulations
- Hydrology
- Salt content

Line (GAC): F GROUND WATER

Competency: F10 Maps (G Wells)

Objectives

To be competent in this area, the individual must be able to:

- Interpret maps that pertain to geology, hydrogeology, and location
- Use and interpret the ground water information registry system through G Wells
- Report well logs according to provincial regulations

LEARNING TASKS

CONTENT

- | | |
|---|---|
| 1. Interpret maps that pertain to geology, hydrogeology and location | <ul style="list-style-type: none"> • G Wells • Information within G Wells |
| 2. Use and interpret the ground water information registry system through G Wells | <ul style="list-style-type: none"> • G Wells • Reporting well log |
| 3. Reporting well logs according to provincial regulations | <ul style="list-style-type: none"> • Procedure • Submission |

Line (GAC): G WATER WELLS**Competency: G6 Artesian Wells****Objectives**

To be competent in this area, the individual must be able to:

- Identify the risks of working with artesian wells
- Identify conditions where artesian wells may be present
- Demonstrate knowledge of requirements for construction and control of artesian wells

LEARNING TASKS

1. Describe regulations related to artesian wells.
2. Describe the process for controlling artesian flow.

CONTENT

- Hydrology
- Regulations
- G Wells
- Well design

Line (GAC): H WATER WELL PUMPING SYSTEMS**Competency: H4 Electrical Regulations****Objectives**

To be competent in this area, the individual must be able to:

- Describe electrical code in relation to Water Well Drilling

LEARNING TASKS

1. Describe electrical code in relation to Water Well Drilling

CONTENT

- Applicable Canadian Standards Association (CSA) Amendments

Reference Materials

Exam Resources

- Water Well Driller Curriculum Guide 035 (2022) - Alberta
- Water Well Driller Certificate of Qualification Exam Breakdown

For further reference materials and resources please contact [BC Ground Water Association](#).

Address: 6500 Beechwood Place, Sooke
British Columbia V9Z 0Y7, Canada
Telephone: 604-530-8934
Website: www.bcgwa.org
Email: secretary@bcgwa.org