Application for Waterworks Operating Permit Guide

Water System Type	Sections not required
Water Haulers (trucks)	*Environmental Operators Certification Program Classification and Training* – not required *Source* – Select “Hauled from an approved source”, enter name of approved source in “Name” (for example, Chetwynd Community Water System) *Treatment Plant* not required – enter “No Treatment” *Distribution* not required – enter “No Distribution”
Hauled water systems (Cisterns)	*Treatment Plant* not required, enter “No Treatment” *Source* – select “Hauled from an approved source”, other fields not required
All others	N/A

1	Legal Owner	Name of legal entity responsible for supplying safe water. May be corporation. Not contractor
2	Operator/Site Information	Person in Charge - operator, main on-site contact for Environmental Health Officer (EHO) Water System Address - physical location of water system, if no street address, use best description of location or km marker (i.e. Km 18.5 Sukunka FSR, or Mile 192 Alaska Hwy)
3	Subtype	Where water system serves more than one purpose, select what you consider the main purpose **Municipal** – City, town, village, regional district, municipality, water utility, strata greater than 200 homes **Residential** – Mobile home park, shared wells, strata less than 200 homes **Water Hauler** – Trucks, bulk fill station **Workplace** – Industrial, commercial, institutional, offices, factories, other businesses **Work Camp** – Forestry camps, drilling camps, temporary camps **Licensed Care** – Long-term care home, hospital **Educational** – Schools, day-cares **Food** – Food services, water bottlers, water dispenser, restaurants, cut & wrap **Recreational** – Seasonal camps, resorts, RV parks, hotel, B&B, community hall, church **Non-potable** – Showers and toilets, truck stop washrooms (exempt under s. 3.1 DWPA)

4	Governance	Choose the applicable governance structure for the water system
5	Type (Source)	**Lake** – includes natural ponds **Flowing** – includes rivers, streams, creeks **Deep well** – greater than 50 ft. (15m) to top of intake screen or uppermost fracture **Shallow well** – less than 50 ft. (15 m) **Reclaimed water** – treated wastewater, only for non-potable uses **Infiltration Gallery** – has horizontal perforated pipes beside or under a surface water body. Usually considered a surface water source, but could be GARP will if the streambed is not disturbed. If intake pipe is in open water, use Lake or Flowing **Other** – provide an explanation
6	Source Status	If there is only one source, the status is Sole. If more than one choose from the following for each source: **Primary** – main source **Combined** – multiple sources operating or alternating **Demand** – only used when demand is high **Standby** – only used when usual source(s) out of service **Seasonal** – only operators when water quality in usual source is poor due to seasonal conditions (i.e. spring run-off) **Inactive** – not used but may still have pump connected
7	System Source Classification	To determine if Groundwater is At Risk of containing Pathogens (GARP) provide either a hydrogeology report or complete the GARP Screening tool named "Screening of Groundwater Sources" found on the Public Health Engineering page
8	Name (Treatment Plant)	Enter “No Treatment” if there is none
9	Design Flow Rate	Use UV rating in gpm. The operator or a design report may also have this information. If unknown, enter "Unknown"
10	Treatment Schematic Sketch Attached	If a treatment schematic has not been submitted previously then one is to be attached to the application.

11	Filtration Type	Select all suspended solids filters applicable **Pre-filtration** – for course solids **Coagulation/Flocculation** – is chemical addition **Slow Sand** – is flow by gravity through biological layer **Rapid Sand** – is by gravity and includes multimedia granular filters **Pressure filtration** – is similar to a typical pool filter as opposed to gravity flow **Cartridge filtration** – uses 10 or 20 in plastic housings – for small water systems **Microfiltration** – ~0.1 µm **Ultrafiltration** – ~0.01 µm **Nanofiltration** – ~0.001 µm **Reverse Osmosis (RO)** – <0.001 µm **Settling/Clarifier** – part of a conventional filtration plant **Flotation** – used at a DAF plant in place of settling. Do NOT enter **GAC** here, it is chemical treatment
12	Smallest Filter/ Media Size	Specify “absolute” for cartridge filters validated for cyst removal; “nominal” otherwise. Cartridge and membrane filters are sized in microns. For media filters, enter the effective particle size.
13	Parameters of Concern	Examples – pH, hardness, Iron, Manganese, Organic Carbon, Arsenic, Lead
14	Chemical treatment process(es)	List all applicable chemical treatment processes. I.e. softener (cation exchange), activated carbon, RO, greensand-type filtration, stabilisation, oxidation, coagulation, sediment filtration, anion exchange, mixed-bed ion exchange, other (describe)
15	Primary disinfection	Select all applicable. Primary chlorination must achieve C·T value of 12 min·mg/L. Ultraviolet must meet NSF Class 55A to achieve primary disinfection.
16	Secondary (residual disinfection)	Usually chlorination or none. Usually specified as >0.2 ppm free available chlorine (FAC)
17	Name (Distribution)	If only one distribution system enter “Distribution System”
18	Number of connections (buildings)	Each residence or building is one connection (not each fixture within a building).
19	Maximum population in 24 hours	Use maximum population served in any 24-hr period during the year. For Food, maximum number of customers/day.
20	Typical population in 24 hours	Typical or average population is a more reasonable estimate of average population, based on operator judgement

21	Total length of distribution (km)	Can be zero. Don’t include service connection lines. Estimate or draw a map to scale. Can include decimals (i.e. 450m = 0.45km)
	Automated Monitoring	**Disinfection residual**
22	Cross connection control program	Cross connection program includes enforcement of an ordinance regulating cross connection (i.e. a by-law, code, or standard). Identify whether a cross connection control program is in place or is included in operating procedures.
23	Flushing program	EHO will assess whether a flushing program is in place or if it's included as part of regular operating procedures
24	Residual Disinfection	See #16
25	Distribution Map Attached	A distribution map is required to be on record. Include applicable components listed in the example
26	Name (Storage)	Enter “No Storage” if there is none
27	Construction Material	Select material of storage tank from list
28	Volume	Enter the volume for each storage tank, not the total of multiple tanks
29	Turnover Time	How many days or hours would the water last in the storage tank if the source was shut off?
30	Mixing	Interior of the tank includes mechanical or motorized components to ensure adequate mixing, prevent stagnation, and improve water quality consistency
31	Baffled	Interior of the tank includes rigid baffles to ensure adequate mixing, prevent stagnation, and improve water quality consistency
32	Potable	Is the water stored in this tanks safe to drink without additional treatment?

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Complete all applicable sections. Incomplete applications may be returned to the applicant resulting in delays

Sections in gray need to be completed in consultation with the Environmental Health Officer (EHO)

A. Owners information		
Type of ownership (select one):	☐ Sole proprietorship ☐ Partnership ☐ Corporation ☐ Society ☐ Other: _____	
1 **Legal Owner** *(e.g. Jane Doe or 123456 BC Ltd.)*:	**Common Name of Water System:**	
Owner Contact Name:	**Owner Contact Number:**	
2 **Legal Owner Mailing Address:**	**City:**	**Postal Code:**

B. Operator/Site Information			
Operator information:			
Person in charge (operator):		Phone/Fax:	
Position:	☐ Owner ☐ Manager ☐ Other: _____	Cell:	
Water system address:		Email:	
City/municipality:		Postal code:	
Mailing/Billing Information: ■ same as operator information			
Mailing address:		Phone:	
City/municipality:	Prov.:	Cell:	
Postal code:		Owner Email:	

Directions to Water System (if in Remote Location):

C. Type of application	
☐ New facility ☐ Owner change ☐ Months of operation change ☐ Data collection/data update ☐ Service change ☐ Name change ☐ Status change (closed/re-open)	
Effective date:	**Comments:**

Have you operated a water supply system within the Northern Health Authority in the past: ☐ YES ☐ NO If yes, state the name of the water system:
Will system operate: ☐ Year Round ☐ Seasonal
If seasonal, months of operation: ☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

Incomplete applications will not be processed and will be returned to the applicant. Any questions should be directed to the Environmental Health Officer.

Assigned EHO:	Received:	
Status: ☐ Permitted ☐ Pending ☐ Approved ☐ Denied		
Category (Include number of connections): ☐ WS 1 ☐ WS 2 ☐ WS 3 ☐ WS 4		

Signature of the Applicant:	Date:
Approved by EHO/DWO:	Date:

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D. Water Systems Information
of sources (include backup sources):
of treatment plants (do not include point-of-use treatment):
of storage locations (do not include pressure tanks):

Complete the following sections for each source, treatment plant, and storage location indicated above.

Does the treatment comply with **4-3-2-1-0** treatment objectives: ☐ Yes ☐ No ☐ Not Required

Required for surface water and groundwater at risk of containing pathogens as per the BC Drinking Water Treatment Objectives (Microbiological)

3 Subtype: ☐ Municipal ☐ Residential ☐ Water Hauler ☐ Workplace ☐ Mobile Camp ☐ Work Camp ☐ Licensed Care ☐ Educational ☐ Food ☐ Recreational ☐ Unknown

4 Governance: ☐ Water Users Community ☐ Strata ☐ Corporation ☑ Partnership ☐ Sole proprietorship (individual) ☐ Joint (good neighbour) ☐ Municipality ☐ Regional district ☐ Improvement district ☐ School District ☐ Other local government ☐ Health authority ☐ BC Hydro ☐ BC Parks ☐ BC Ferries ☐ Other provincial ☐ Federal crown corporation ☐ Aboriginal ☑ Other federal

Environmental Operators Certification Program Classification and Training					
Has the drinking water system been classified by EOCP: ☐ Yes ☐ No					
Water treatment classification:	☐ Level 1	☐ Level 2	☐ Level 3	☐ Level 4	☐ Small Water System
Water distribution classification:	☐ Level 1	☐ Level 2	☐ Level 3	☐ Level 4	☐ Small Water System
Is the operator certified for this level of classification: ☐ Yes ☐ No ☐ N/A (answered no to above) If yes, certified operator name: _____ EOCP #: _____ If no, why:					
For small water systems, list trained operator(s) and their training course(s):					
Operator(s):			Course(s):		

Number of Point of Use (POU) or treatment locations if applicable: _____

POU Treatment Description: _____

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SOURCE (please select below)
If there is more than one source, this section will need to be completed for each source

Name: **Address/Location:** **City:**

5 **Type:** ☐ Lake ☐ Flowing ☐ Spring ☐ Shallow well ☐ Deep well ☐ Infiltration gallery ☐ Hauled from approved source ☐ Piped from approved source ☐ Dugout ☐ Surface runoff ☐ Rain ☐ Reclaimed water ☐ Other: _____

6 **Status:** ☐ Sole ☐ Primary ☐ Combined ☐ Demand ☐ Standby ☐ Seasonal ☐ Inactive

7 **System Source Classification:** ☐ GARP ☐ GARP-Virus only ☐ Low risk groundwater ☐ Surface Water ☐ Unknown

Source Assessment Completed: ☐ Yes ☐ No

Global Position (degree decimal): **Latitude:** North
Altitude: ☐ ft ☐ m **Longitude**: West

SOURCE (optional)
If there is more than one source, this section will need to be completed for each source

Name: **Address/Location:** **City:**

Type: ☐ Lake ☐ Flowing ☐ Spring ☐ Shallow well ☐ Deep well ☐ Infiltration gallery ☐ Hauled from approved source ☐ Piped from approved source ☐ Dugout ☐ Surface runoff ☐ Rain ☐ Reclaimed water ☐ Other: _____

Status: ☐ Sole ☐ Primary ☐ Combined ☐ Demand ☐ Standby ☐ Seasonal ☐ Inactive

System Source Classification: ☐ GARP ☐ GARP-Virus only ☐ Low risk groundwater ☐ Surface Water ☐ Unknown

Source Assessment Completed: ☐ Yes ☐ No

Global Position (degree decimal): **Latitude:** North
Altitude: ☐ ft ☐ m **Longitude**: West

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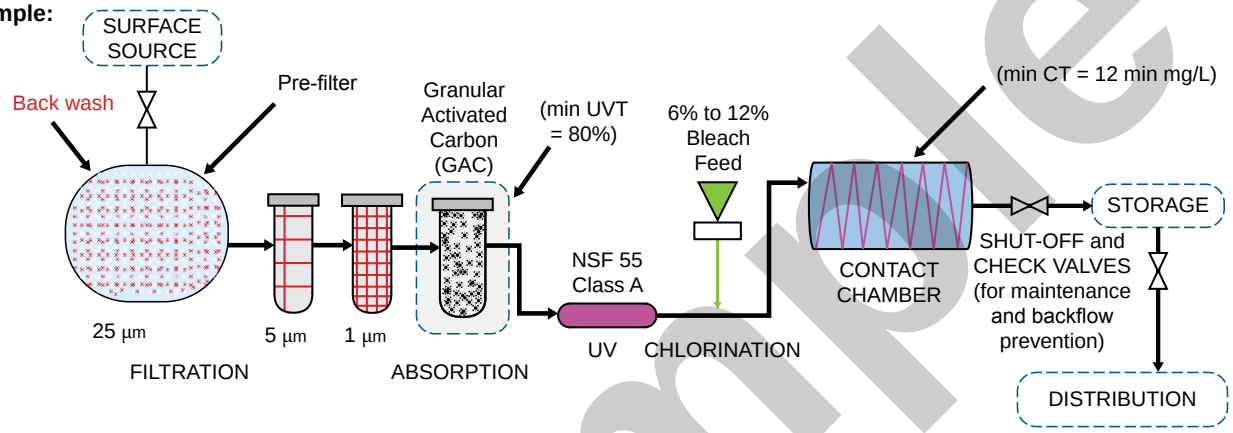
TREATMENT PLANT (please complete all relevant fields below)

8 **Name:** **Address/Location:** **City:**

9 **Design Flow Rate:**

10 **Treatment Schematic Sketch Attached:** ☐ Yes ☐ No

Example:



11 **Filtration Type:** ☐ Prefiltration ☐ Coagulation/Flocculation ☐ Slow Sand Filtration ☐ Rapid Sand Filtration ☐ Pressure Filtration ☐ Cartridge Filtration ☐ Microfiltration ☐ Ultrafiltration ☐ Nanofiltration ☐ Reverse Osmosis ☐ Setting/Clarifier ☐ Flotation ☐ Other ☐ None

12 **Other Filtration:**

13 **Smallest Filter/Media Size (microns):**

14 **Chemical Removal Reason:** ☐ AO CDWQG List Chemicals ☐ MAC/IMAC CDWQG List Chemicals ☐ Both AO and MAC/IMAC List Chemicals ☐ Other ☐ None

AO Aesthetic Objective (I)MAC (Interim) Max. Acceptable Concentration CDWQG Cdn. Drinking Water Quality Guidelines

15 **Parameters of Concern:**

16 **Chemical Treatments Processes:**

Primary Disinfection: ☐ Chloramination ☐ Chlorination ☐ Ozonation ☐ Chlorine Dioxide ☐ Ultraviolet ☐ None ☐ Other: _____

Secondary (Residual) Disinfection: ☐ Chloramination ☐ Chlorination ☐ None ☐ Other: _____

Automated Disinfection: ☐ Yes ☐ No **Monitored/Controlled:** ☐ Yes ☐ No

Global Position (degree decimal): **Latitude:** North

Altitude: ☐ ft ☐ m **Longitude**: West

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DISTRIBUTION (please complete all relevant fields below)	
17 **Name:**	**City:**
18 **Number of Connections:**	19 **Maximum Population Served in 24 Hours:**
21 **Total Length of Distribution Mains (km):**	20 **Typical Population Served in 24 Hours:**
22 **Cross Connection Control Program:** ☐ Yes ☐ No	
23 **Flushing Program:** ☐ Yes ☐ No	
24 **Residual Disinfection:** ☐ Chlorination ☐ Chloramination ☐ None ☐ Other: _____	
Other Secondary Disinfection:	

25 **Distribution Map Attached:** ☐ Yes ☐ No

Example:

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RESERVOIRS/STORAGE TANKS (please complete all relevant fields below) - If there is more than one storage this section will need to be completed for each storage component

26 **Name:** **Location:**

Type: ☐ Elevated Tank ☐ Ground Level ☐ Underground ☐ Uncovered

27 **Construction Material:** ☐ Concrete ☐ Fiberglass ☐ Aluminum ☐ Stainless Steel ☐ Epoxy Coated Steel ☐ Wood ☐ Other: _____

Construction Date: _____ 28 **Volume:** _____ ☐ m^3 ☐ litres ☐ Imp ☐ gal ☐ US 29 **Turnover Time:** _____ ☐ hours / ☐ days

Security: ☐ Covered ☐ Enclosed ☐ Hatch is sealed ☐ Hatch is locked ☐ Vents are screened ☐ Security Fencing ☐ Security Fencing ☐ Gate locked ☐ Alarmed

30 **Mixing:** ☐ Yes ☐ No **Water Level Indicator:** ☐ Yes ☐ No

31 **Baffled:** ☐ Yes ☐ No **Separate Inlet at Top:** ☐ Yes ☐ No **Separate Outlet at Bottom:** ☐ Yes ☐ No

Outflow By: ☐ Gravity ☐ Hydropneumatic or Air Pressure Pumping 32 **Potable:** ☐ Yes ☐ No

Free Chlorine readout at outlet: ☐ Yes ☐ No **Reservoir Sampling Tap:** ☐ Yes ☐ No

Global Position (degree decimal): **Latitude:** North

Altitude: ☐ ft ☐ m **Longitude**: West

RESERVOIRS/STORAGE TANKS (please complete all relevant fields below) - If there is more than one storage this section will need to be completed for each storage component

Name: **Location:**

Type: ☐ Elevated Tank ☐ Ground Level ☐ Underground ☐ Uncovered

Construction Material: ☐ Concrete ☐ Fiberglass ☐ Aluminum ☐ Stainless Steel ☐ Epoxy Coated Steel ☐ Wood ☐ Other: _____

Construction Date: _____ **Volume:** _____ ☐ m^3 ☐ litres ☐ Imp ☐ gal ☐ US **Turnover Time:** _____ ☐ hours / ☐ days

Security: ☐ Covered ☐ Enclosed ☐ Hatch is sealed ☐ Hatch is locked ☐ Vents are screened ☐ Security Fencing ☐ Security Fencing ☐ Gate locked ☐ Alarmed

Mixing: ☐ Yes ☐ No **Water Level Indicator:** ☐ Yes ☐ No

Baffled: ☐ Yes ☐ No **Separate Inlet at Top:** ☐ Yes ☐ No **Separate Outlet at Bottom:** ☐ Yes ☐ No

Outflow By: ☐ Gravity ☐ Hydropneumatic or Air Pressure Pumping **Potable:** ☐ Yes ☐ No

Free Chlorine readout at outlet: ☐ Yes ☐ No **Reservoir Sampling Tap:** ☐ Yes ☐ No

Global Position (degree decimal): **Latitude:** North

Altitude: ☐ ft ☐ m **Longitude**: West