

Environmental Operators Certification Program

201, 3833 Henning Drive, Burnaby, BC V5C 6N5

Ph: 604.874.4784 Fax: 604.874.4794 Toll Free 1.866.552.EOCP



Application for Classification of Water Treatment Facility

Classification Fee: \$50.00 +GST

PLEASE PRINT

Notes:

1. To be considered a water treatment facility, the facility must contain one or more Water Treatment components (see sections 7, 8, 9 and 10). Inline treatment such as chlorination and fluoridation are considered part of the water distribution system unless combined with other chemical or physical treatment processes.
2. An up-to-date process flow schematic **must** accompany this application.

Name of Facility:	_____			Facility Number:	_____
Location:	Street Address _____	City _____	Province _____	Postal Code _____	
Mailing Address: (if different)	Street Address _____	City _____	Province _____	Postal Code _____	
Phone:	_____	Fax:	_____		
Facility Email:	_____	Facility Location UTM Coordinates	Northing Easting	_____	

Chief Operator:	First Name _____	Surname _____	Certification Number:	_____	
Address:	Street Address _____	City _____	Province _____	Postal Code _____	
Phone:	_____	Fax:	_____		
Email:	_____				

Name of Owner or Applicant :	_____ Municipality, Company, etc.				
Contact Person:	First Name _____	Surname _____	Title:	_____	
Mailing Address:	Street Address _____	City _____	Province _____	Postal Code _____	
Phone:	_____	Fax:	_____		
Email:	_____				

Facility Billing Contact:	First Name _____	Surname _____	Title:	_____	
Address:	Street Address _____	City _____	Province _____	Postal Code _____	
Phone:	_____	Fax:	_____		
Email:	_____				

MINISTRY OF HEALTH INFORMATION	Health Authority: _____	Local Health Area: _____
Service Delivery Area: _____		

OFFICE USE ONLY		
Total Points: _____	Initials: _____	Facility Classification: _____

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1. SIZE

		Pts
a) Population during periods of normal maximum use	_____ persons	1 – 5
b) Flow during periods of normal maximum use (daily average)	_____ m ³ /d	
c) Design flow (daily average)	_____ m ³ /d	1 – 5
d) Peak daily flow	_____ m ³ /d	
e) Clearwell size	_____ m ³	1 – 5

2. WATER SOURCES & SUPPLY

a) Water Source			
i. Groundwater (confined aquifers)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
ii. Surface water or groundwater under the direct influence of surface water	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
iii. Surface water and groundwater (confined aquifers)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	7
b) Water Supply			
i. Gravity	<input type="checkbox"/> Yes	<input type="checkbox"/> No	0
ii. Pumped	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

3. VARIATIONS IN RAW WATER (Choose only one)

a) Little or no variation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	0
b) Moderate, requires treatment changes 10% to 50% of the time	<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
c) Severe, requires pronounced and/or frequent treatment changes	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

4. RAW WATER QUALITY

a) Raw water quality includes levels requiring treatment of:			
i. Taste and/or odour	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
ii. Colour	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
iii. Iron and/or manganese	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
iv. Turbidity	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
v. Total and/or fecal coliforms	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
vi. Algae	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
b) Raw water quality is subject to:			
i. Industrial and commercial waste pollution	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
ii. Agricultural pollution	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
iii. Urban runoff, erosion, and storm water pollution	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
iv. Recreational use (boating, fishing, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	2

5. PRE-TREATMENT

a) Aeration Treatment Systems			
i. Aeration	<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
ii. Packed tower aeration	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
b) Screening, coarse (>5mm)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
c) Screening, fine (<5mm)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	4

6. CHEMICAL ADDITION

a) Fluoridation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
b) pH adjustment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	4
c) Stability or corrosion control	<input type="checkbox"/> Yes	<input type="checkbox"/> No	4
d) Copper sulphate treatment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
e) Powdered activated carbon	<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

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6. CHEMICAL ADDITION (con't)

- f) Chemical coagulant addition
- g) Chemical oxidant addition
- h) Rapid mix units
 - i. Mechanical mixers
 - ii. Injection mixers
 - iii. In-line blender mixers

		Pts
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2

7. FLOCCULATION

- a) Hydraulic flocculators
- b) Mechanical flocculators

<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3

8. CLARIFICATION/SEDIMENTATION

- a) Horizontal flow (rectangular basins)
- b) Horizontal flow (round basins)
- c) Up-flow solids contact sedimentation
- d) Inclined plate sedimentation
- e) Tube sedimentation
- f) Dissolved air floatation

<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	8

9. FILTRATION

- a) Single media filtration
- b) Dual or mixed media filtration
- c) Microscreens
- d) Diatomaceous earth filters
- e) Cartridge filters
- f) Slow sand filters
- g) Direct filtration
- h) Membranes
 - i. Ultrafiltration
 - ii. Nanofiltration
 - iii. Reverse Osmosis

<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10

10. ADDITIONAL TREATMENT PROCESSES

- a) Catalytic oxidation, absorption filtration
 - i. Greensand
 - ii. Birm
 - iii. Oxidation/filtration
 - iv. Sequestration
- b) Ion Exchange / Softening
 - i. Ion exchange
 - ii. Chemical precipitation softening
- c) Electrodialysis

<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	8
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	15

11. DISINFECTION

- a) Chlorination
 - i. Gaseous chlorine
 - ii. Liquid or powdered hypochlorite
 - iii. Chlorine dioxide

<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

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11. DISINFECTION (con't)

- b) On-site generation of chlorine
- c) Ozonization
- d) Ultraviolet

		Pts
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

12. RESIDUALS DISPOSAL

- a) Discharge
 - i. Discharge to lagoons
 - ii. Discharge to lagoons and then raw water source
 - iii. Discharge to raw water
 - iv. Disposal to sanitary sewer
- b) Mechanical dewatering
- c) On-site disposal
- d) Solids composting

<input type="checkbox"/> Yes	<input type="checkbox"/> No	1
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	8
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5

13. LABORATORY ANALYSIS

- a) Bacteriological/Biological
 - i. All bacteriological/biological laboratory work done outside plant
 - ii. Membrane filter procedures
 - iii. Use of fermentation tubes or any dilution method, fecal coliform determination
 - iv. Biological identification
 - v. Virus studies or similarly complex work conducted on site
- b) Chemical/Physical
 - i. All chemical/physical laboratory work done by outside personnel
 - ii. Push button colourimetric methods for simple test such as chlorine residual, pH
 - iii. Additional procedures – titration, jar tests, alkalinity, hardness
 - iv. More advanced determination such as numerous inorganics
 - v. Highly sophisticated instrumentation such as atomic absorption and gas chromatography

<input type="checkbox"/> Yes	<input type="checkbox"/> No	0
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	7
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10
<input type="checkbox"/> Yes	<input type="checkbox"/> No	0
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5
<input type="checkbox"/> Yes	<input type="checkbox"/> No	7
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10

14. SYSTEM INSTRUMENTATION

- a) Flow Measurement
 - i. Weir/flume
 - ii. Mechanical/magnetic
 - iii. Ultrasonic
- b) Instrumentation (SCADA)
 - i. System to provide data with no process operation
 - ii. System to provide data with limited process operation
 - iii. System to provide data with moderate process operation
 - iv. System to provide data with extensive or total process operation

<input type="checkbox"/> Yes	<input type="checkbox"/> No	1
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3
<input type="checkbox"/> Yes	<input type="checkbox"/> No	0
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4
<input type="checkbox"/> Yes	<input type="checkbox"/> No	6

15. OTHER

- a) Standby power
- b) Other (Please Specify) _____

<input type="checkbox"/> Yes	<input type="checkbox"/> No	2
<input type="checkbox"/> Yes	<input type="checkbox"/> No	1 - 5

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COMMENTS BY OPERATOR:

FOR OFFICE USE ONLY:

Date Received: _____

Flow schematics received: Yes No

Date Completed: _____

Signature: _____

Total Points: _____

Comments:

Date Entered: _____

By: _____