



Attn: David Mowry

# QUOTATION

1732 West 61st Ave.  
 Vancouver, BC V6P 2C3  
 604-677-6777  
 Fax: 264-9777

Quotation #: \_\_\_\_\_

Quote Date: \_\_\_\_\_

Purchase Order #: \_\_\_\_\_

**BILL TO:**

David Nairne + Associates Limited  
 Suite 250 - 171 West Esplanade  
 North Vancouver BC V7M 3J9  
 Attn: David Mowry

Phone: 604 984 3503  
 Fax: 604 984 0627

**Terms:** Net 30, OAC  
FOB Origin

**SHIP TO: (SAME or...)**

**Shipping Instructions**

Freight Co.: T.B.A.  
 Terms: Collect  
 Phone #: \_\_\_\_\_  
 Site Contact: \_\_\_\_\_  
 Phone: \_\_\_\_\_

**Job: Budgetary Quote for Surface Water Filtration 120GPM**

QTY	Unit	PART NO.	DESCRIPTION	UNIT \$	Extended \$
			<b>120GPM Flow</b>		
1			Duplex Parallel Multi Media Filtration		
			30'x72" Electronic Control		
3	ea		Harmsco Cartridge Housings		
6	ea		1 micron Absolute Cartridge Filters		
4	ea		30 GPM Trojan UV Sterilizers (NSF)		
			w/ Communications Centre		
1	ea		Chemical Feed Pump / Storage Tank for		
			Chlorination Dosing Pump		
1			Residual Chorine Monitor		
1	ea		Installed in 8x20' Insulated Steel Container		
			<b>Total:</b>		<b>\$118,156.67</b>
			<b>ADDERS</b>		
1	ea		60gr/hr Ozone System	<b>Total:</b>	<b>\$145,081.94</b>
1	ea		Point of entry Duplex Cartridge Housing		
			for Chlorine reduction	<b>Total:</b>	<b>\$369.34</b>
			<b>Subtotal</b>		
			GST (5%)		\$0.00
			PST (7%)		\$0.00
			<b>TOTAL DUE</b>		<b>\$0.00</b>

**Notes:**

Ozone system quote is for equipment only  
 POE System does not include installation

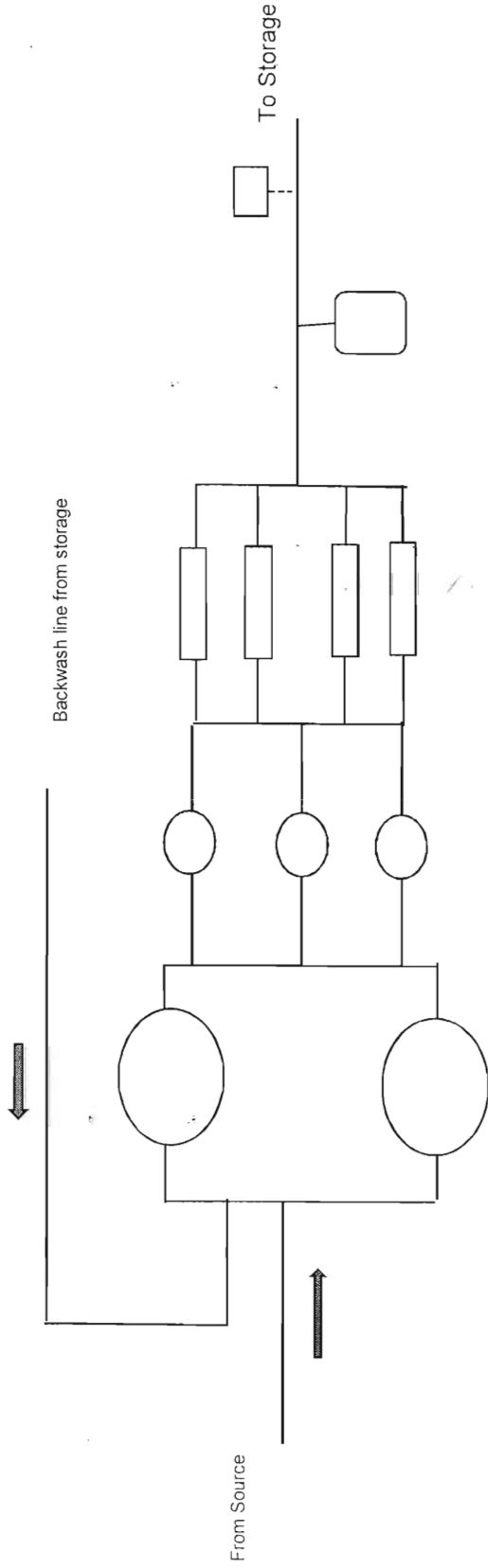
*Standard Filterco Terms & Conditions apply*

**ORDER AUTHORIZATION:**

Authorized Signature \_\_\_\_\_ NAME \_\_\_\_\_ DATE \_\_\_\_\_

Presented By: Rob Young  
 Direct: 604-230-8150  
 Email: rob@filterco.net

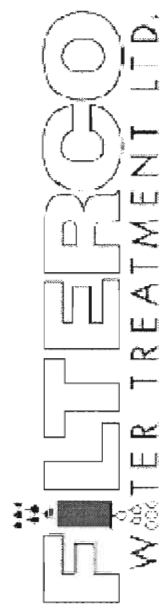
Signed \_\_\_\_\_



1. Multi Media Filtration
2. Cartridge Filtration
3. UV Sterilizers (30 GPM EA. NSF)
4. Hypochlorite Feeder
5. Chlorine Monitor.

**HAGENSBERG**  
**Small Water system**  
 PROCESS FLOW DIAGRAM (NTS)  
 February 2009  
 Filterco Water Treatment - Rob Young

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questions

>>> "rob.young" <rob.young@telus.net> 4/7/2009 10:18 AM >>>  
Filterco Water Treatment Ltd  
Direct: 604.230.8150  
Office: 604.677.6777  
www.filterco.net

Please see the attached pictures of the treatment trailer we built for the city of Nanaimo as well as a sample of a duplex housings system and a whole house backwashing carbon filter for POE chlorine reduction. FYI : when showing the pictures, it is important to note, The system for Nanaimo has the capability to suck water from a source (river/lake) what I have quoted you assumes water and pressure is provided to the treatment train.

1)

a) Can you describe the multimedia? Is it anthracite - sand - gravel? Maintenance? Cost and availability to replace the gravel?

"These filters contain several types of media and gravel under bedding. Multi-media filtration is a proven design concept; the coarse media layers in the top of the tank trap large particles, and successively smaller particles are trapped in the finer layers of media deeper in the bed. The result is a highly efficient filtering since removal takes place throughout the entire bed. Multi-Media depth filters typically remove particles 10-15 microns in size or larger". They are virtually maintenance free and do not to be replaced.

b) Can you describe how the system meets 43210? multi media - cartridge filters - UV.

The multi media and cartridge filters work on the turbidity issues. We might be able to use 5 micron filters rather than the more expensive 1u absolute. That choice can sometimes be a health officer decision. The UVs require filtration down to 5 micron. Chlorine is most effective on viruses, and the UV on crypto/ Giardia the combination of UV Chlorination gives us the 3/4 log removal.

c) what is the role of the communications centre for the UV?

provides a record of operation or for dial out if the unit breaks down? The ComCenter keeps a record of UV intensity of each of the 4 Units, alarm history, lamp hours. We can ramp up the reporting capabilities of the UV and the Chlorine monitor and make them as sophisticated as required. Alarm lights on the trailer? Dial out? Full PLC, are all possible. I have quoted a basic system, but we can upgrade as the customer / Interior Health requires

d) Is the Cl2 only for the residual, not a treatment? Can be either, but this is set up for residual. Simply a matter of dosing and allowing more time.

2) The Cl2 reduction is a good point into the buildings. Can this unit be installed fairly easily inside existing buildings?

I quoted 20" Big Blue Filter Housings --- A Simple install.  
An option would be to go with backwashing carbon filters. Much Longer life of the carbon with this option and does a better job of removal but added cost up front ( +/- \$600.)

## questions

### 3) Maintenance Items

MM Filters - none.

UV: clean sleeves about quarterly (depends on supply quality) we can upgrade to Hallet UV that have automatic wiper system.

UV: Lamps every two years. ( about \$150 per unit)

Cartridge Filters: Water condition will determine replacement. Each 1micron AB filter is about \$475, 5 Micron \$180.00

Chlorine Pump. Semi annual cleaning/rehab. Recommend having an "onsite spare pump" for quite swap out if/when needed.

### 4) Can the trailer be heated?

This is a shipping container and is heated, has lights and electrical panel. we can put the equipment in a trailer w/ wheels if need be.

Thanks

Rob

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[www.filterco.net](http://www.filterco.net)

