



Treatment Committee - June 2022 Newsletter

A Summary of the Positive and Negative Attributes of the Treatment Options

- 1) Maintain Current Operation – Well known and proven. This is the base case.
- 2) Point of Use (POU) - sometimes referred to as “under sink”. (See description below.)
 - Doesn't treat all water or even all sinks in the house. Could very easily lead to consumption or potable use of untreated water.
 - Water quality and use is determined by the end user.....Current license makes the FCID responsible for water quality and makes the FCID liable. FCID would need to negotiate new terms to operating license.
 - Ultraviolet can't treat water at temperatures above 40°C so Ultraviolet cannot be relied on to provide potable water at a sink without the inclusion of a dedicated sink/faucet water heater to supply **both** hot and cold water.
 - Distillation is an option but inclusion of a dedicated sink/faucet water heater is needed to supply **both** hot and cold water.
 - No chlorine.
 - Can use any of the available sources....more adaptable.
 - Low initial cost.
 - Low ongoing operating cost.
- 3) Point of Entry (POE) – Well known proven system.
 - Water quality and use is determined by the end user.....Current license makes the FCID responsible for water quality and makes the FCID liable. FCID would need to negotiate new terms to operating license.
 - Low initial cost.
 - Electrical energy consumption of about \$70/yr for 8 usgpm POE UVT.
 - No Chlorine.
 - Can use any of the available sources....more adaptable.
 - Low initial cost.
 - Low ongoing operating cost.

4) Central treating

- Single source; Relies on a single source. Changing or supplementing primary/original source would be expensive, probably equal to or more than initial Central Treating cost.
- Would need system disinfection at start up and every incident w/o chlorine. CWT with chlorine would make start and re-start easy and inexpensive.
- Emergency pump operation would require entire system disinfection, just like the current shock and rinse treatment.
- Liability is all FCID. The board and FCID would have to be insured against harmful health effects resulting from water quality.
- Must confirm availability of insurance coverage for harmful health effects from water quality. (Current policy quotes are unchecked.)
- Highest initial cost.
- Highest annual operating cost arising from attendant labor.
- Chlorine detrimental effects on polybutylene tubing could be very expensive for some water users.

6) Pipeline

- No nearby water treatment facility has replied to our inquiry to buy treated water.
- High Initial cost of the pipeline with little to no salvage value.
- Ongoing cost of buying water will reflect the Village Of Kaslo or Woodbury capital expenditures (not cheap).
- Liability belongs jointly to others and FCID or nobody. Assignment of liability would be difficult. Multiple liabilities may make it difficult to insure, or may make it easy. This is an issue to be confirmed before expending any capital.
- Reliability? None have a perfect record.
- VOK is planning capital additions (UVT) so water price could be rising.
- Off spec water is not necessarily immediately known leading to more liability issues.
- Chlorine detrimental effects on polybutylene tubing could be very expensive for some water users.

Point of Use Water Treatment – A Brief Description

Point Of Use options include:

- A) Small particle filter and an ultraviolet disinfection cell. This apparatus usually feeds a separate faucet at the kitchen sink. The primary kitchen sink faucet remains untreated and not recommended for consumption or for use in food preparation or for cleaning of food preparation utensils or dishes. The separate faucet fed by the filter and ultraviolet treatment cell is used for drinking water and food preparation.
- B) Water distillation can be used to produce potable water. In all cases the distiller takes raw water feed and produces sterile potable water which is inventoried in a dedicated tank. The user has the option then to decant the distilled water into a pitcher or fit the distiller with a dedicated pump which could feed multiple taps throughout the residence using a piping system redundant to the “raw” water piping system.

One of the Fletcher Creek Improvement District water users has been using a water distiller for about 20 years. The original system, still in use today, operates reliably and has not given any trouble at all. Maintenance has been limited to cleaning with a vinegar solution once a year.

The water distiller takes 3 hours to produce 3 to 4 liters of potable water using a standard 120V electric supply.

There are at least two manufacturers of like distillers.

A photo of the packaged equipment appears below:



If you have any questions regarding the operation of the unit please send them along to nkelly1955@gmail.com. I will collect the questions and get answers and comments back to those that are interested.

Looking Forward

We expect no significant events to report on over the summer:

- The Pilot Studies progress in an uneventful way, gathering data.
- The committee will gather firm prices on the equipment, materials, and labor to complete cost estimates.

Don't expect to see a July or August Treatment Committee Newsletter. If I'm re-elected, you can expect to get a full update in the fall after we change filter media at Pilot Study Site I, and present the cost estimates for each of the treatment options.

Annual General Meeting

See you at the Annual General Meeting, June 7, 7pm at St. Andrew's United Church in Kaslo, and don't forget to bring ID proving Canadian citizenship and BC residency.