



## THE VILLAGE OF ASHCROFT FAQ #2 – WATER TREATMENT PLANT - FILTRATION

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### **1. Why do we require filtration?**

The Village of Ashcroft draws our drinking water from the Thompson River and as a surface water source it is at risk of containing pathogens. (Pathogens were explained in FAQ #1.) We have our water tested weekly for E.coli and coliforms and in addition we have a full spectrum test done on our water annually. The full spectrum test results are included in our annual report and they indicate that many components of our water are very good. While this means that we did not have to make special allowances for filtering out any of these components, it does mean that we do still need to filter the water for protozoa.

### **2. Does the Village test for protozoa?**

The Village does not test for the presence of protozoa. Protozoa may not be present all of the time however because we use surface water the *risk* is always there. Due to the serious health consequences that are possible from people drinking water contaminated with protozoa the BC Provincial Drinking Water Treatment Objectives for surface water require a 99.9% (3-log) removal of protozoa which will be accomplished through filtration.

### **3. What are the main types of filtration?**

There are two main types of filtration in use today – direct (sand) filtration and membrane filtration. Council toured both types of plants and spoke with the operators. All three of these plants were designed by different engineering firms but the processes remain the same.

Direct filtration requires the water to be gravity fed through a substantial depth of sand that will filter out most of the impurities. Sand doesn't provide a 100% guarantee that all impurities will be removed so the water is then passed through UV disinfection prior to going into the system.

Membrane filtration guarantees that 100% of impurities will be removed as the pores in the membrane material are much smaller in size than any contaminates. UV is not required with membrane filtration and consumers are assured safe water at all times.

### **4. What type of filtration is Ashcroft looking at?**

Ashcroft will be installing a membrane filtration system. After reviewing all of the data and touring the various sites, we felt that it was the most cost effective choice. The overall costs are very similar; however the ongoing operating costs for membrane will be less than for sand. In addition, the footprint of a membrane plant is roughly 20% smaller which again reduces ongoing operation and maintenance.

### **5. How are we sure this is the best decision?**

The Village has been studying our water for well over 10 years in preparation for a filtration system. We did extensive testing on a daily basis for over a 12 month period gathering data on the characteristics of the water that we use. We have spoken to other small communities who have similar water sources and they are pleased with the membrane system. The decision was based on overall costs, size of plant and the guarantee that water from a membrane system will not have contaminates.