

Turbidity Index

Good (less than 1 NTU)

It is recommended that newborns and people with weakened immune systems drink boiled water or a safe alternative at all times.

Fair - (Water Quality Advisory) - (1 to 5 NTU)

It is recommended that children, the elderly, people with weakened immune systems, and anyone seeking additional protection drink boiled water or a safe alternative.

Poor - (Boil Water Notice) - (greater than 5 NTU)

It is recommended that all users drink boiled water or a safe alternative. Tap water intended for drinking should be brought to a rolling boil for at least one minute. NTU (Nephelometric Turbidity Unit)

Answers to Common Questions about Turbidity.

What is turbidity?

In general terms the word turbidity is a measure of water clarity, and is related to the amount of suspended matter present in the water. Clear water corresponds to a lower turbidity value, while murky or cloudy water will have a higher turbidity value.

Summerland has highly coloured water at certain times of the year; this is not to be confused with turbidity. Water can contain a significant amount of colour appearing brown in tone, and still have very good clarity or low turbidity.

What causes turbidity?

Turbidity can be caused by fine suspended particles of clay, silt, organic, and inorganic matter, plankton, and other microscopic organism that are picked up by water as it passes through a watershed. Short-lived turbidity spikes that are sometimes observed in certain areas within the water distribution system are usually the result of sediment on the pipe bottom being lifted into suspension from increased water velocities. An example of this would be the opening of a fire hydrant.

Why is turbidity monitoring important?

At one time turbidity was only thought to be a concern for aesthetic reasons. While turbid waters are still very displeasing to the consumer, we now know that with increased turbidity also comes a decrease in water quality. Through scientific studies it has been proven that the risk to human health increases as turbidity levels rise. By monitoring and reporting on turbidity levels in our water systems, the District can help inform and educate the public, enabling each individual to make the best choice for their situation or needs.

What are the impacts of turbidity?

As water travels through our watershed picking up materials, contaminants such as bacteria,

viruses, and parasites (eg. Giardia and Cryptosporidium) can attach themselves to the suspended particles in turbid water. These particles then interfere with disinfection by shielding contaminants from the disinfectant (eg. Chlorine); Cryptosporidium is an organism that is mainly unaffected by chlorine.

Who is most at risk?

People at most risk include the elderly, newborns, and anyone with weakened immune systems.

How can you protect yourself?

For those at risk or during times of elevated system turbidities, increased protection can come from: boiling your drinking water and allowing it to cool before consumption or by selecting a safe alternative. When boiling, water should reach a rolling boil for a minimum of 1 minute.

Which water sources are most affected by turbidity?

Surface waters (lakes, streams, rivers) are generally impacted to a much higher degree than groundwater sources (wells).

What is an NTU?

NTU stands for Nephelometric Turbidity Unit. It is an industry accepted unit of measure for turbidity and is determined by an optical measurement of water's ability to scatter and absorb light rather than transmit it in a straight line.

What is the maximum acceptable turbidity level?

The maximum acceptable turbidity level as defined in the Guidelines for Canadian Drinking Water Quality is 1.0 NTU.

Where is turbidity measured in Summerland?

Both the Summerland and Garnett Valley Water Systems are equipped with on-line turbidity meters, which read and record all water turbidity values entering the systems.

What affect does Summerland's new water treatment plant have on turbidity?

The new Water Treatment Plant reduces turbidity values to 0.20 NTU, or less, 95% of the time. Prior to the completion of the Water Treatment Plant turbidity values in the Summerland Water System were generally greater than 1 NTU for approximately 6 months of the year.

Need more information?

Check out the Interior Health Authority website at <http://www.interiorhealth.ca> , or Contact Summerland's Works and Utilities Office at 250-494-0431.