

Englishman River Clay Banks

The Englishman River water treatment plant which began testing in 2019 and commissioned in January 2020 is well equipped with many operating safeguards in place to protect the integrity of the drinking water supply for the City of Parksville and the Nanoose Bay Peninsula Water Service Area. To ensure the integrity of the water system for residents and businesses, ERWS follows the operating guidelines set by Island Health which issues the operating permits to ERWS. The City is a partner in the Englishman River Water Service (ERWS) with the Regional District of Nanaimo and is a partner in the RDN's drinking water and watershed protection program.

During the testing period in 2019, City of Parksville and Regional District of Nanaimo staff received extensive training. A Level 4 water treatment operator was hired to run plant operations along with one Level 3 water treatment operator and three Level 2 water treatment operators, all capable of providing coverage in an emergency. ERWS has an ongoing emergency response plan for water treatment and water distribution systems.

Recently, the City of Parksville has received a few inquiries related to "clay banks" on the Englishman River and if there is reason for concern. This release will provide information about the natural occurring wall of clay behind some properties on Kaye Road in the Rivers Edge subdivision located in the Regional District of Nanaimo. Groundwater flows out of the bank causing pieces of the bank to become unstable and fall into the river; this turns the river grey until the water washes it away.

Prior to construction, significant study and testing was undertaken to determine if clay bank failure would be an issue and it was determined debris from the clay banks does not pose a threat to the ERWS treated water. Part of the water treatment plant testing included proof piloting on the ultra filtration membranes by running samples of the water containing the clay, removed without issue. During testing, clay bank turbidity and colour were analyzed and during plant construction, measures put into place to offset any clay bank failures and thereby ensure the purity of water coming from the plant.

In February, there was significant sloughing of the clay banks (pics attached). Data verified any particles which could be harmful were removed from the water during the treatment process. The clay particles are small and pass through the sand separator and strainers but because they are too large to pass through the fibers of the membrane filtration system, are washed off during the backwash cycle and removed. During a clay bank event, the situation is carefully monitored, and any adjustments are made.

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Protection and enhancement of the water supply, a priority for the City of Parksville and the Englishman River Water Service and is reflected in the mission statement, “*An environmentally sensitive use of water to improve fish habitat and domestic water supply.*” To successfully accomplish this mission requires careful stewardship of both the surface water and groundwater sources. The ERWS water treatment plant supplies water to residents and businesses of the City of Parksville and the Nanoose Bay Peninsula Water Service Area.



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For more information:

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