

## **Multi-jurisdictional partnership works to address perpetual slide**

*by Doug Holmes*

Sometime between the years 1914 and 1917, in the area known as Paradise Flats near the present-day Summerland Golf Club, the ground above a steep canyon overlooking Trout Creek started to erode. Dirt, rocks, uprooted trees and other debris gradually began funnelling down the slope into the creek, and the slide continues to this day.

The phenomenon, referred to as the “perpetual slide”, has been subject to several geotechnical and hydrological studies and each has identified potential emergency situations and risks to infrastructure, property and public safety should the creek become blocked and subsequently breached with a surge of water and debris travelling downstream.

Complicating matters, in May this year, a significant landslide occurred directly opposite the perpetual slide on the other side of the creek on snpink'tn reserve lands. Cracks in the bedrock indicate another slide is possible and the public is advised to stay away from the area for their own safety. It is also disrespectful and illegal to trespass on reserve lands.

Both sides of the creek are subject to ongoing monitoring by the District of Summerland, snpink'tn/Penticton Indian Band (PIB), and Okanagan Nation Alliance (ONA). Regular drone surveys are conducted to obtain historical data on slide locations and pooling in the creek. Six springs, the golf course pond and the Summerland water system are also continuously monitored for water quality and environmental tracers to help determine the origin of the slide. (In 2022, flexible and durable high-density polyethylene pipes were installed along Canyon View Road to reduce watermain breaks and ensure domestic water doesn't leak and contribute to the slide.)

In 2018, the District drilled four boreholes at the top of the perpetual slide on the Summerland side and installed instrumentation to measure subsurface movement and groundwater elevations to help determine the subsurface conditions and depth of the slope failure.

At this point, not much more can be done to stabilize the slide. Given the steep canyon slope, it would cost millions to bring in machinery and there is no certainty any proposed solution would work.

Therefore the main focus has been to manage debris and downstream waterflow through the coordination of a Trout Creek Steering Committee, which includes representatives from the ONA, PIB, District of Summerland, provincial Ministry of Water Land and Resource Stewardship, BC Parks, Fisheries and Oceans Canada (DFO), Summerland Research Station, a representative from the Summerland agricultural community, and technical consultants. The group meets several times a year to address concerns and undertake projects both at the slide location and along the dike on Trout Creek leading towards Okanagan Lake.

One project that started in 2021 has been to re-naturalize the lower reach of Trout Creek, which once was rich with local fish, bird and plant life but has been impacted with water turbidity from the slide and alterations such as channelization. The restoration is led by the ONA in partnership with all levels of government and is guided by both western science and Traditional Ecological Knowledge from the PIB. The work includes widening the creek and restoring riffles and spawning beds. After the project's first year, salmon had returned to Trout Creek for the first time in decades.

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