

The Chilcotin River Landslide: Potential Links to Commercial Logging

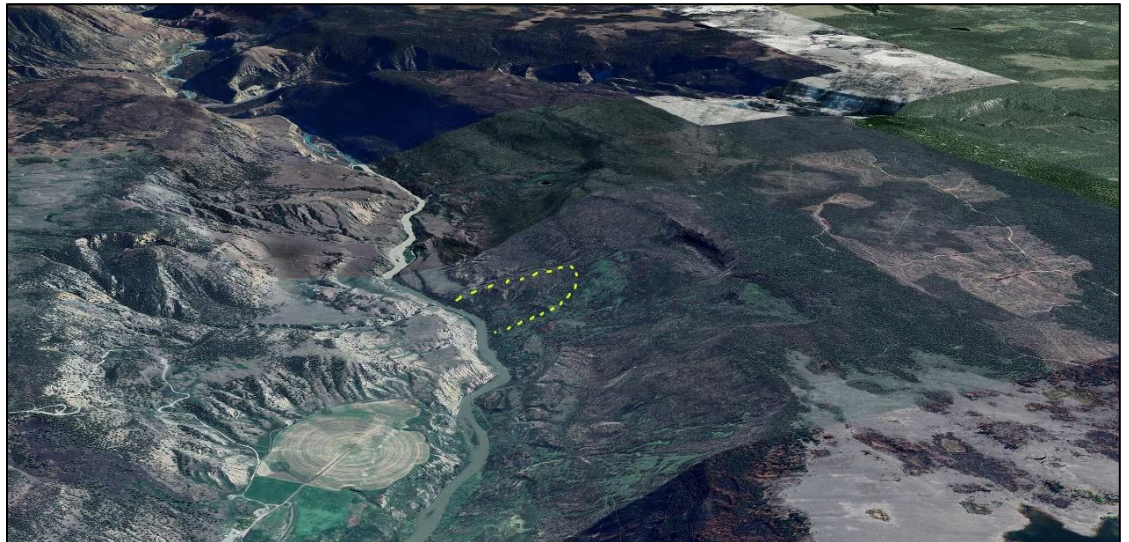
By Will Koop
August 6, 2024 (third update)

*It was actually [Jeremy] Vogt who had delivered Vanessa's husband to begin his rafting trip down the Chilcotin River from the bridge at Hanceville on Monday, July 29. "We were at the Hanceville bridge by 2 p.m. Monday and that's when it rained," Vogt said. "While we were unloading, we looked upstream on the Chilcotin and there was this massive thunderstorm. **It was a wall of rain coming down the valley. In fact, he hid under the bridge until the storm passed.**" That was the last Vogt heard of the rafter until a friend told him about the Chilcotin River landslide. A man was rescued from the slide area on Wednesday morning by the Central Cariboo Search and Rescue. Information officer Debra Bortolussi said two of her members were dispatched to the area after the slide where they rescued the man who was transported out of the area by helicopter and then taken to Cariboo Memorial Hospital. "The story he stated was that he had set up camp for the night and around midnight or so he heard some rumbling, so he got up and started running and told his dog to run too," Bortolussi said. (Source: "Dog found after being lost in Chilcotin River landslide, officials confirm," Chilliwack Progress, August 2, 2024)*

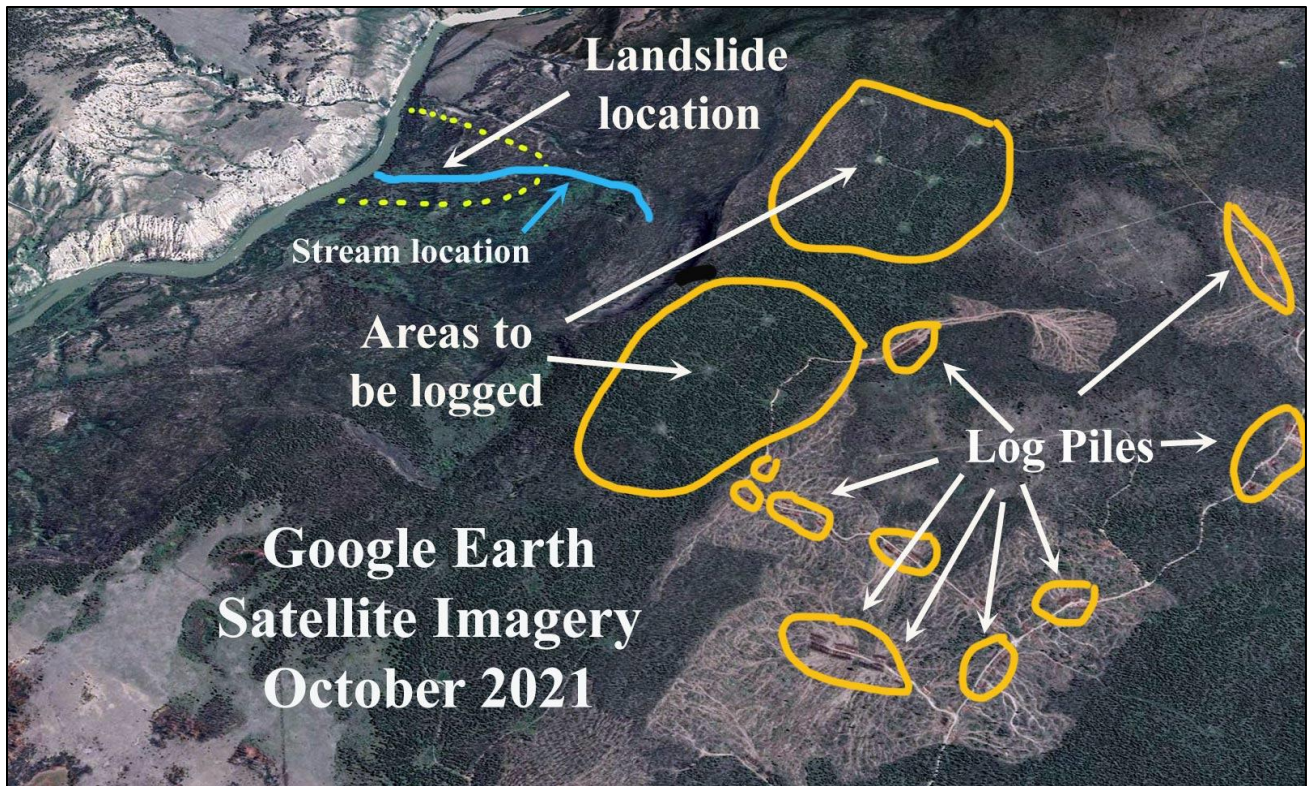
After hearing about a significant landslide damming the Chilcotin River in the early afternoon of July 31, 2024, I looked for map information that might locate its exact location. There was only one map generated for public viewing at that time, showing two Regional Emergency Zone notices for the Chilcotin River, one below the slide, and one above. That helped me to identify the possible location.

I then used snaps from the only helicopter video, and from a First Nation's photographer showing images taken from the north side of the slide, to confirm the exact location on Google Earth. That is when I noticed the clearcut logging above, and directly south, of the landslide.

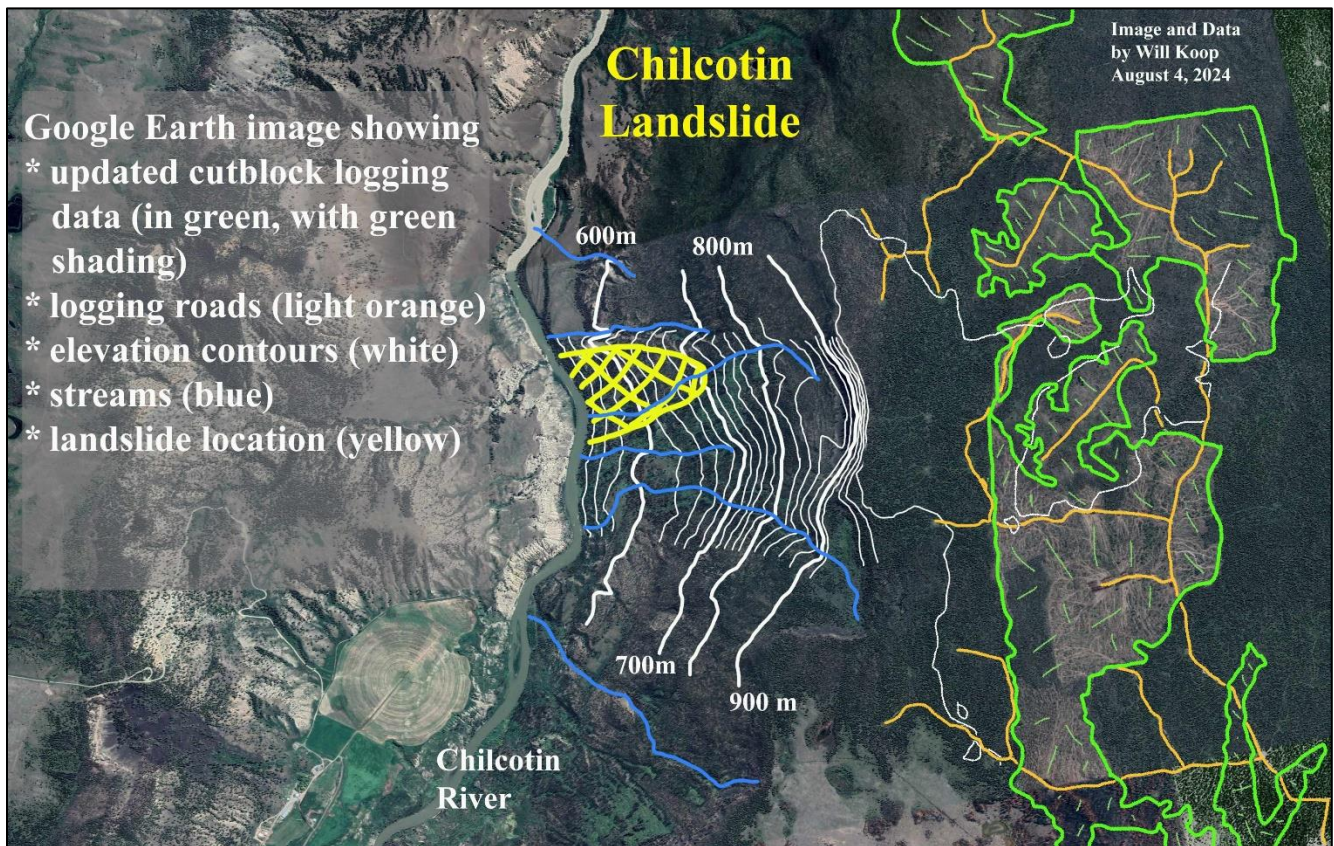
I then created four images from different perspectives from Google Earth online satellite data and plotted the zone of the landslide on each. I noted that the Google Earth imagery was dated from October 2021, and that the fresh logging taking place, showing multiple piles of fresh logs, was incomplete.



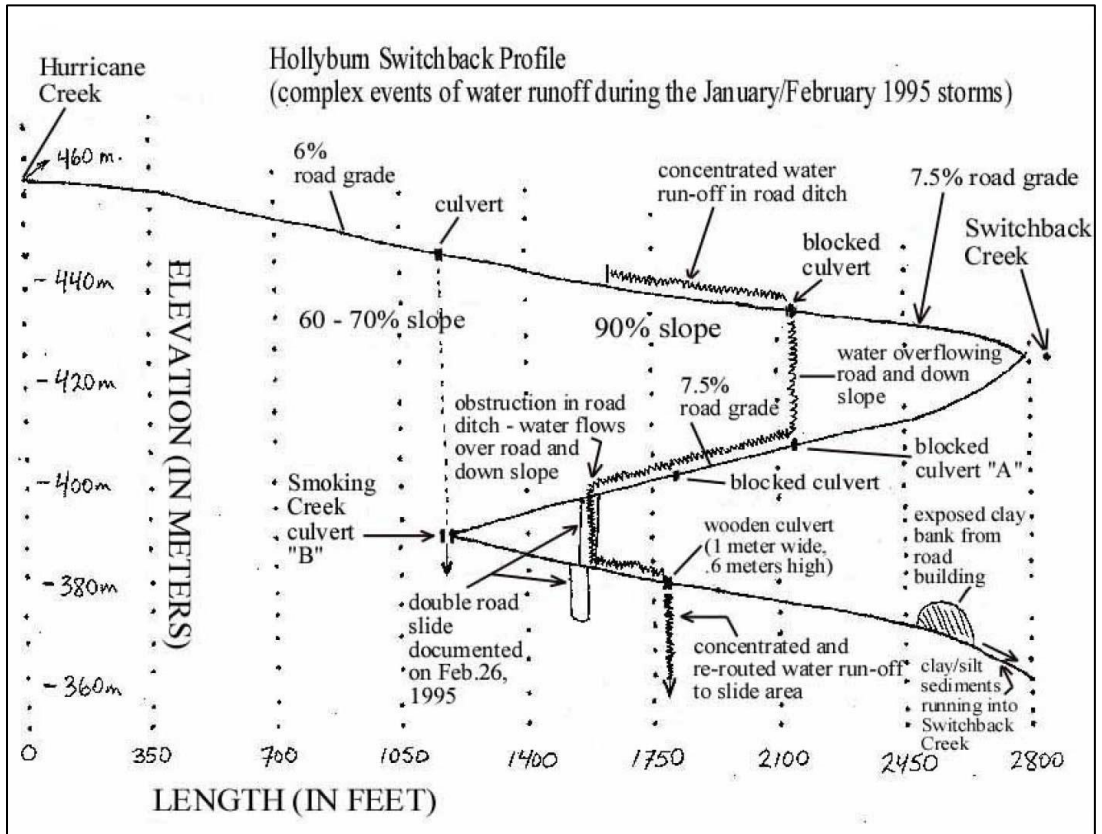
The following day, August 1, I then used IMAP BC to generate an up-to-date map showing various provincial base map data layers: streams, contours, logging roads, and logging cut-block polygons. I then transferred that information onto my Google Earth images to make an outline of the IMAP BC features, shown below.



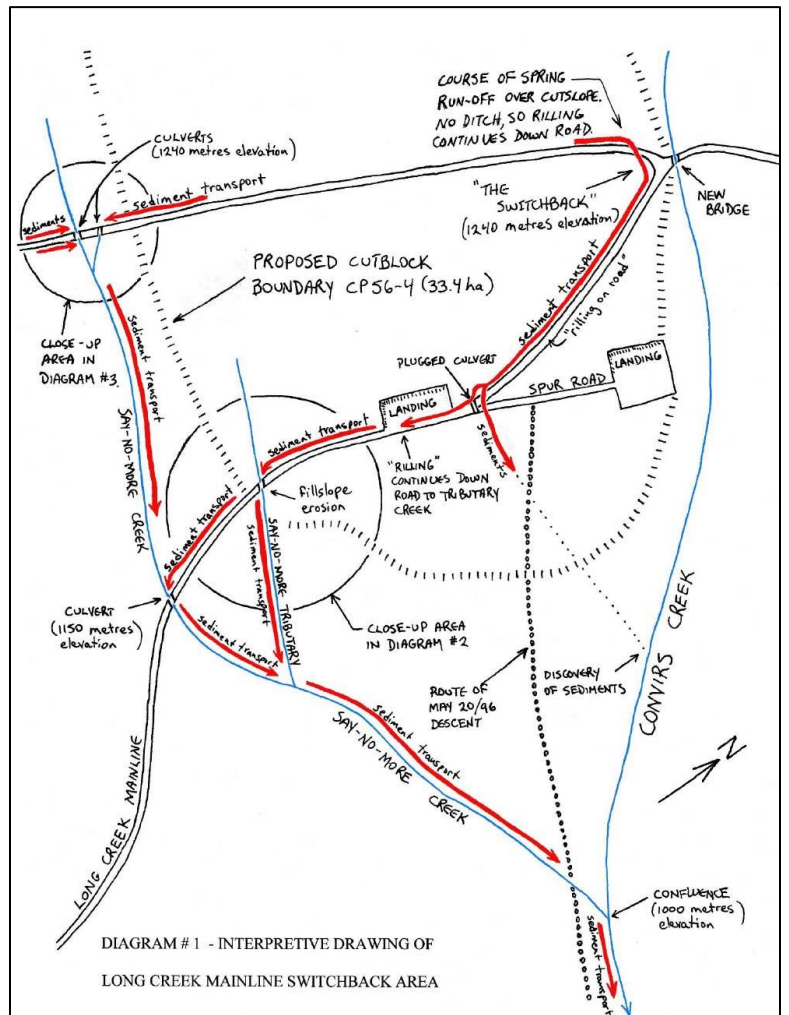
The question I had: was logging responsible for the landslide? Of course, there was no means to prove this possibility without conducting on-the-ground investigations, but the upslope proximity of logging necessarily forced my question to remain. The commentaries generated on media platforms on August 1 and 2 suggested that recent forest fires were the primary possibility as to why the forest slope had failed. Nevertheless, that possibility must also be proved or shown to be most likely.



The reason why I jumped into this issue so quickly on the day the landslide became news, was because of my largely self-taught experiences on this subject. My very first such occasion was the matter of the Capilano landslide on the west side of the Capilano drinking water reservoir that occurred in October 1995. At that time, I was involved in conducting research on the history of logging in Metro Vancouver's drinking water supply watersheds, and I had recently taken a forest hydrology course by Idaho-based forest hydrologist Allen Isaacson. I went to the site to investigate, and later created a document that I published on December 8, 1995, *Not Coming Clean: The Culvert Creek Landslide*. As I was to discover, the source of the landslide came from a logging road switchback, where rediverted waters, during intense rainstorms, were directed from different road angles into one logging road culvert. That water was diverted into a forest slope area that had no stream profile history, water which was directed to the landslide site, super-saturating the slope, causing over 5,000 cubic metres of material to fail and slip. The Capilano drinking water reservoir was then shut down for six months!



In 1996, I published a confidential draft report, *Say-No-More: A Reconnaissance Report of a Tributary Drainage of Convers Creek, Located on the Western Slopes of the North Arm of Quesnel Lake, British Columbia*. It examined how West Fraser's logging, and primarily logging road network ditch drainages (shown in the diagram to the right), were diverting and concentrating rain and snowmelt waters, eroding the landscape and bring silt into drinking waters and polluting salmon and fresh fish waters.





The above photo, and the photo below, are snapshots from a drone flight video. The top photo shows the slope profile, revealing that the slope is gentle to moderate, and not “steep” as reported in some news stories.

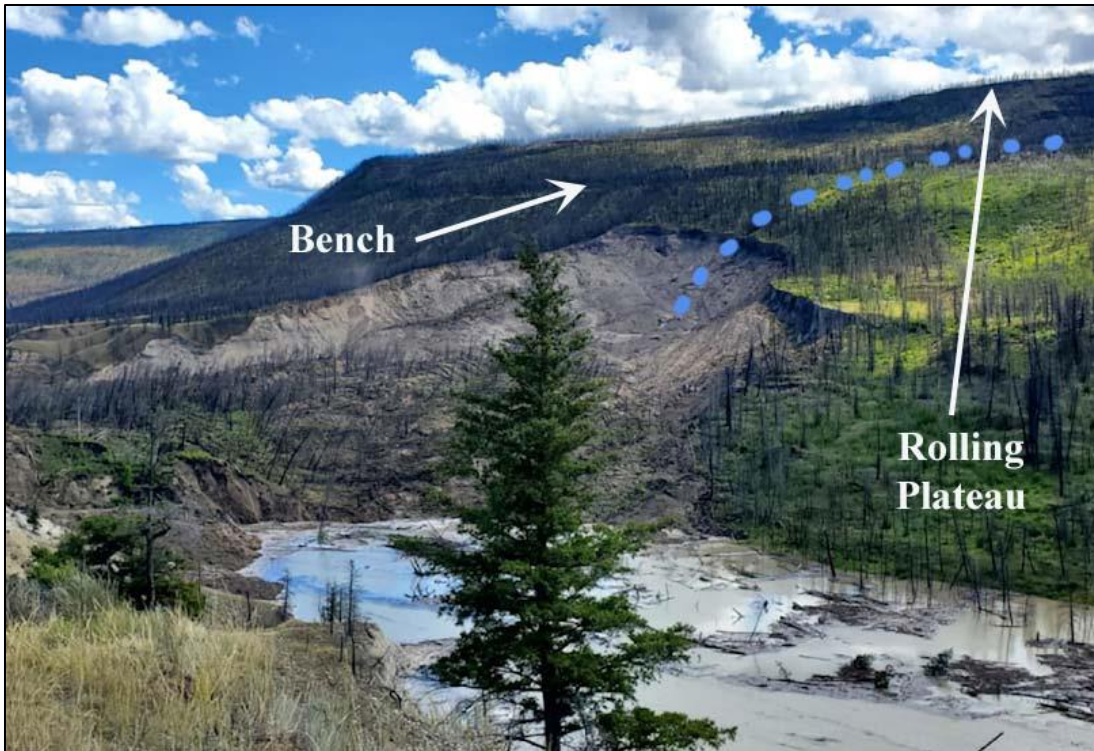


Given the fact that the slope is gentle to moderate, there was something in the upper profile area of the debris slide that induced the slope to fail.



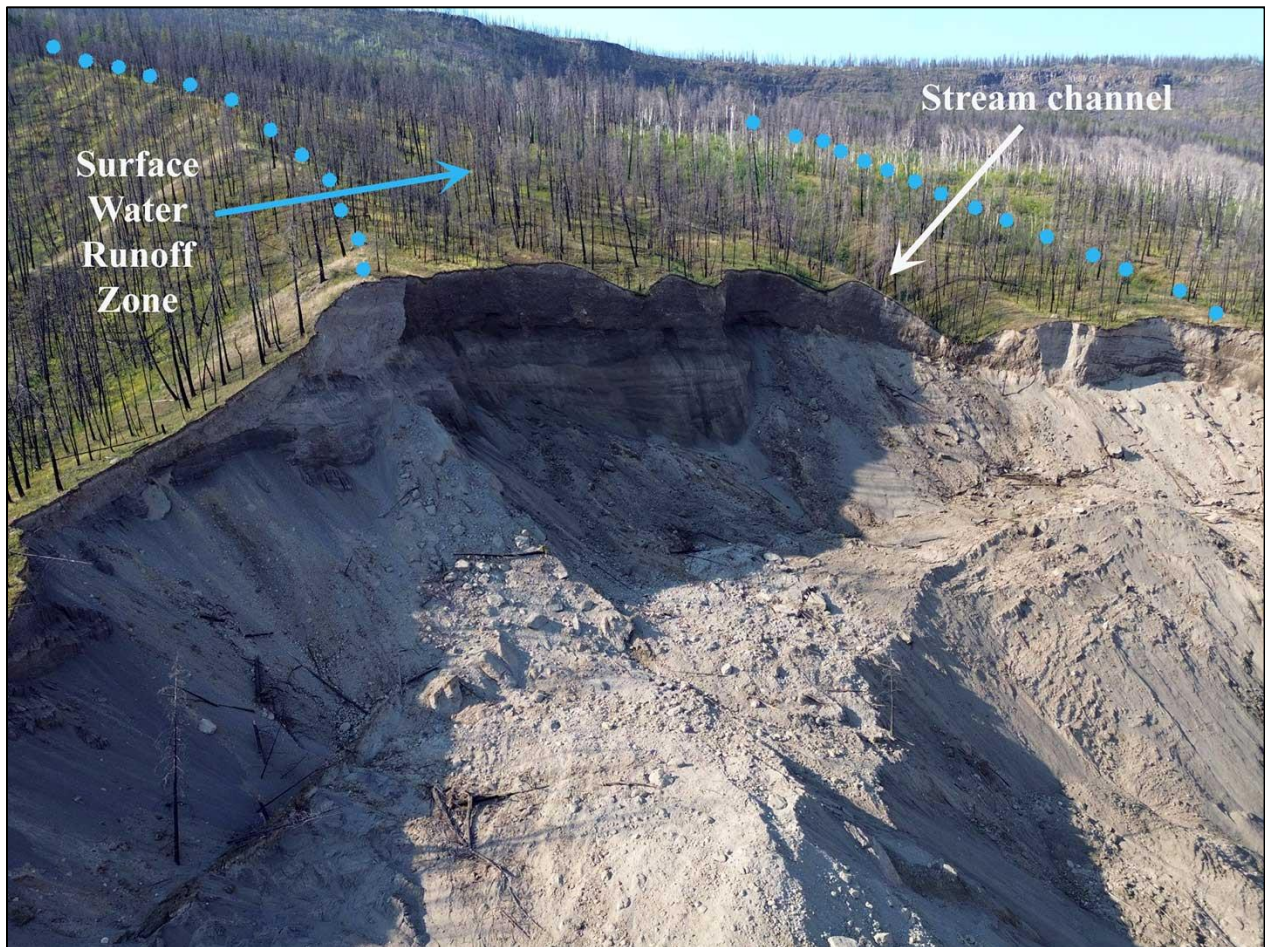
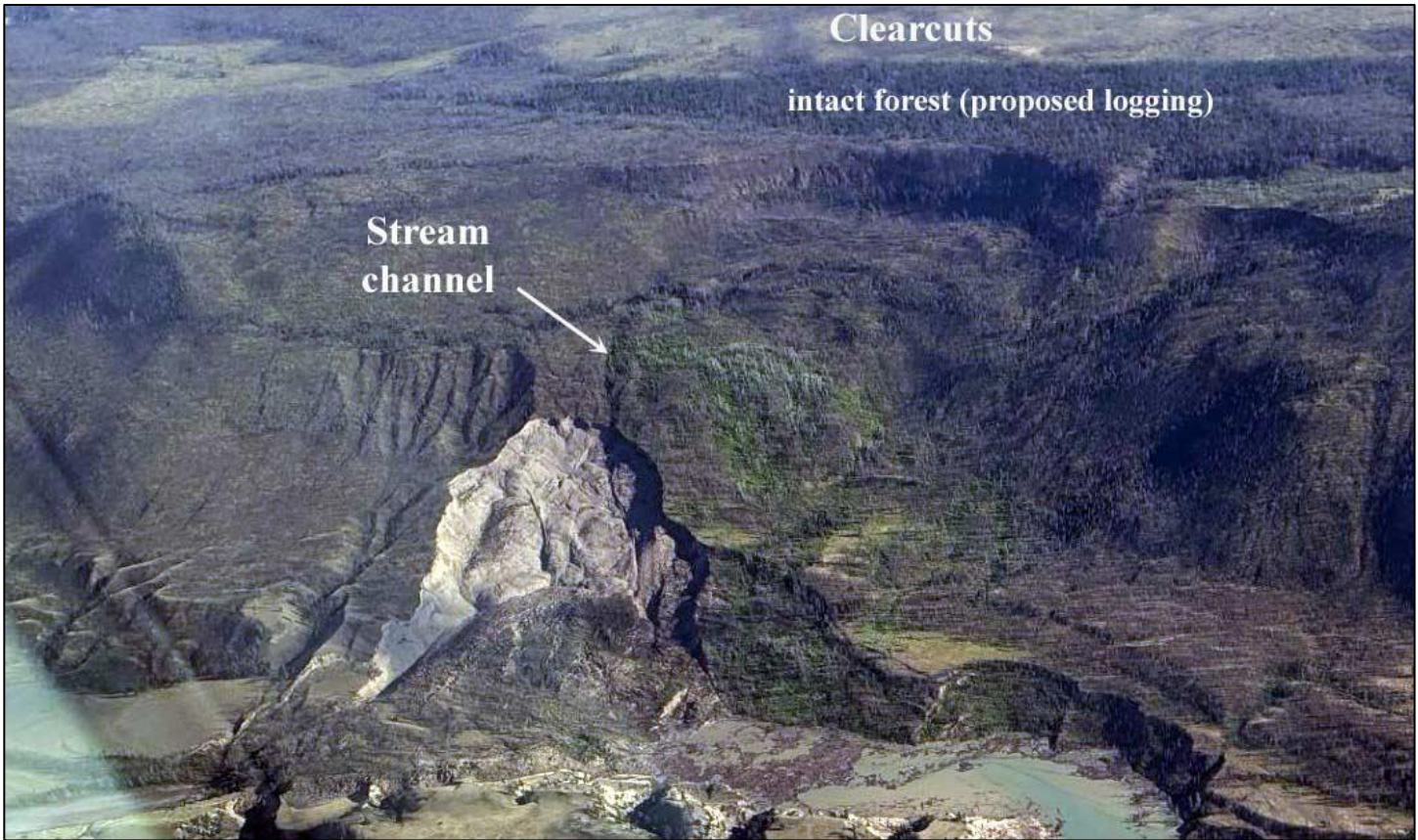
In the top photo, note the middle of the top of the slide area. You can see an entry channel of small stream (see close-up photos on next page). The stream channel curves back to the right onto the lower bench, situated below the rolling plateau where the clearcuts are located.

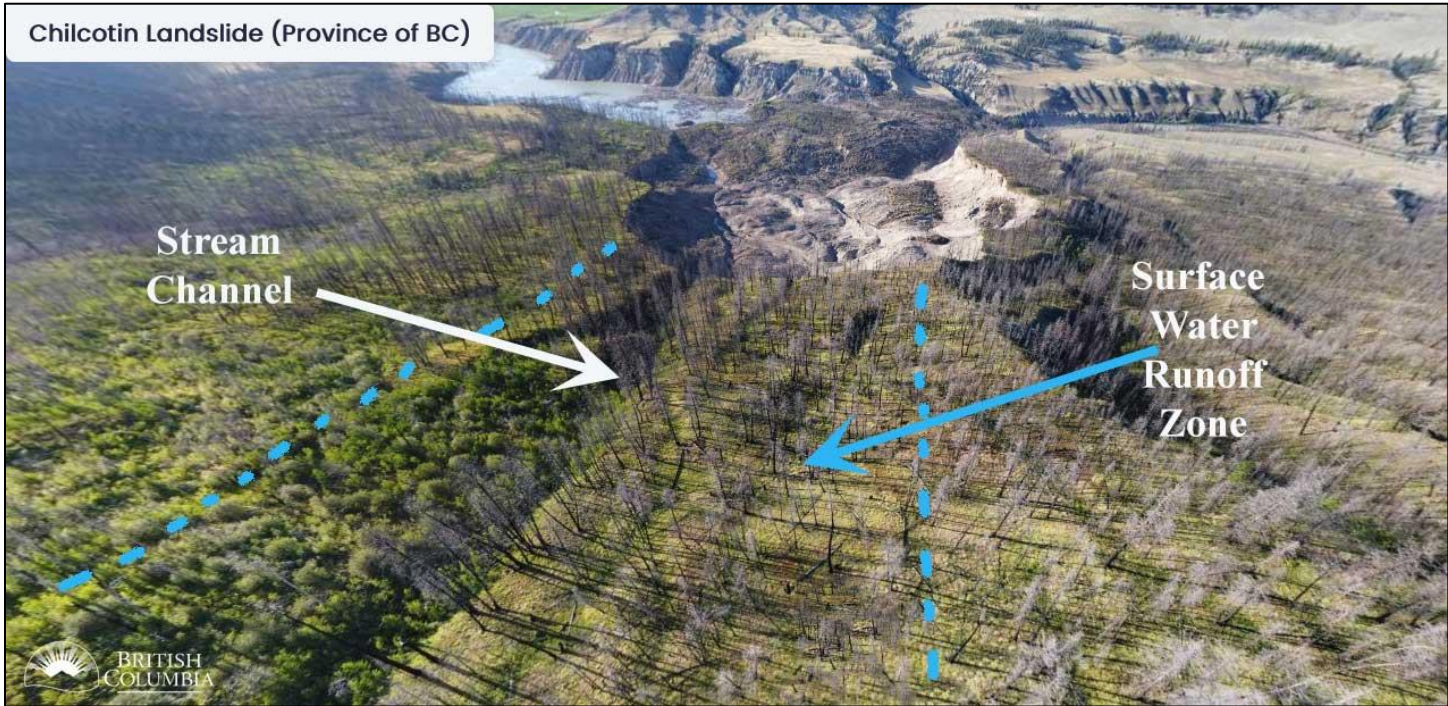
The photo on the left provides a closer view from a different angle. This photo also shows that not all the forest / forest canopy had been burned from the last fire(s). On the lower bench, above the top of the landslide area, are many standing live trees, and live trees are present in the debris slump.



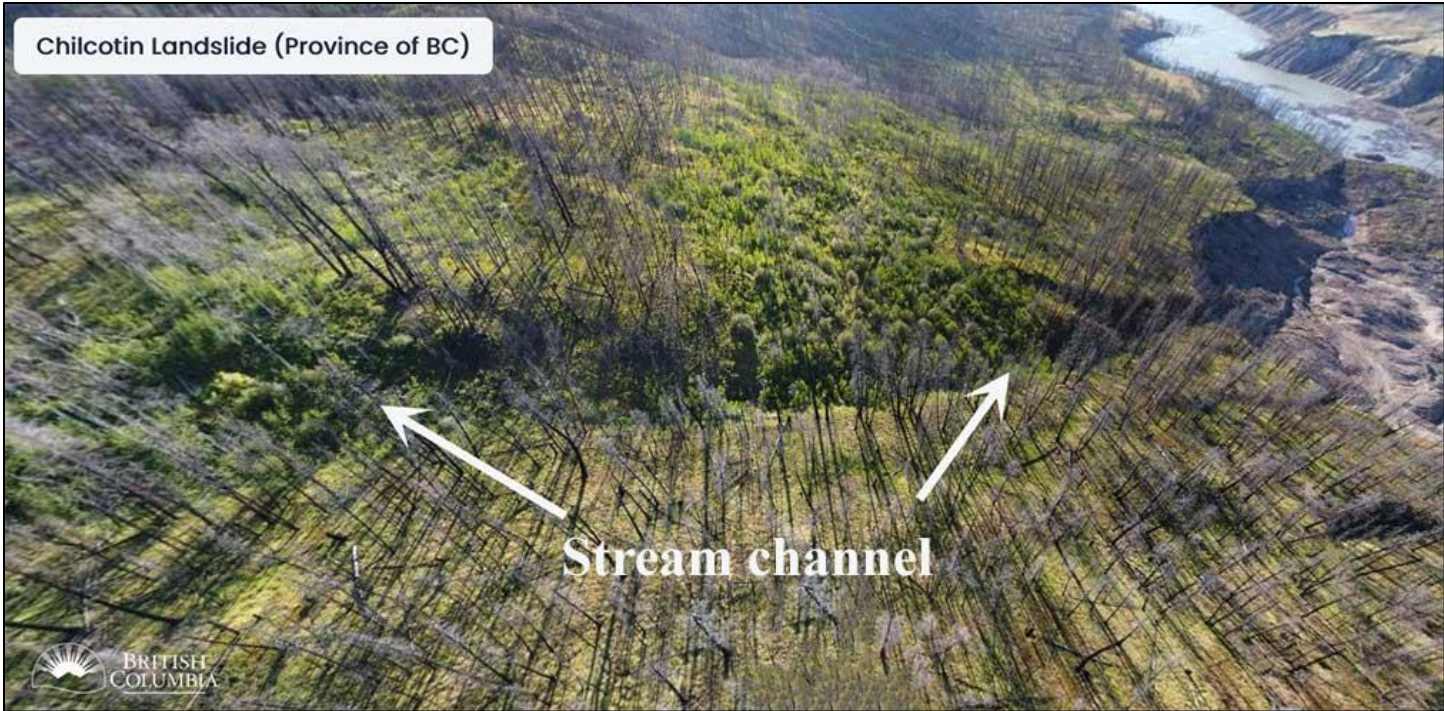
The top photo lends another perspective of the lower bench area.

The middle and lower photos are close-up images from the top photo of the previous page. They help show the creek channel and the direction from where the creek stems.



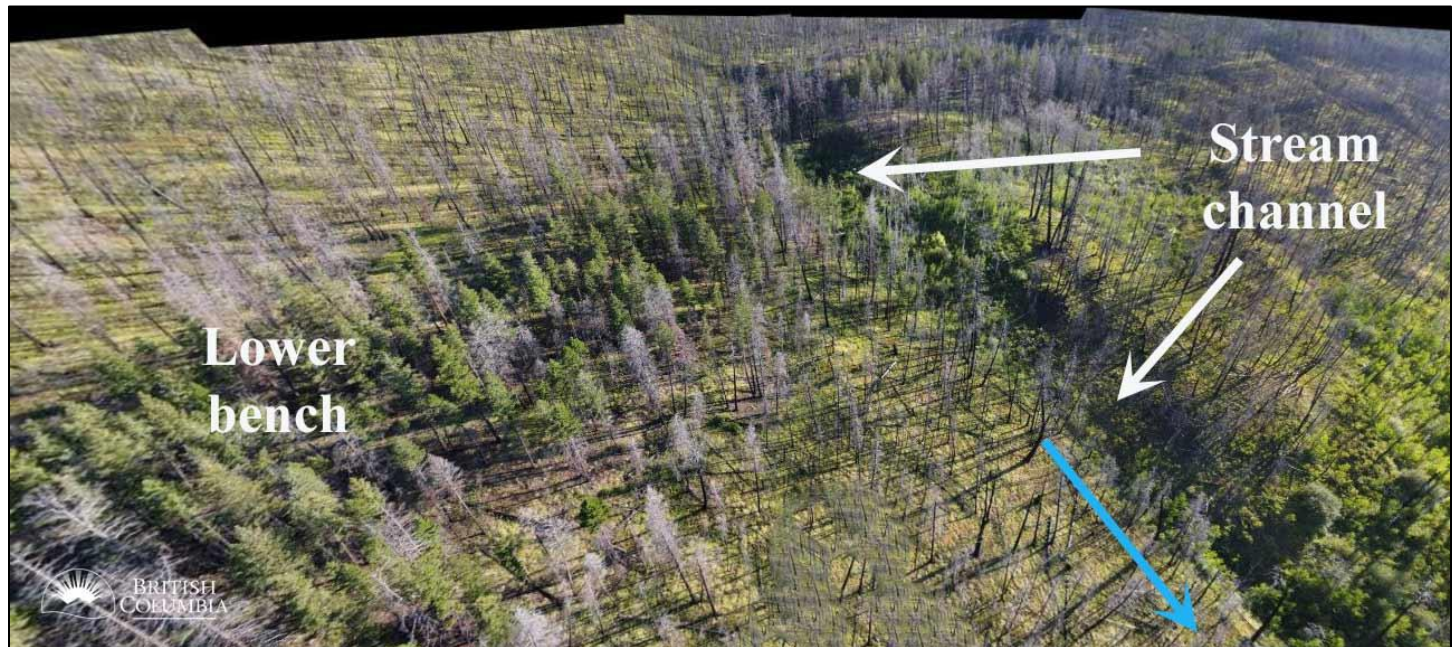


Close up of stream channel above slide (source: British Columbia province website, "EmergencyInfoBC")

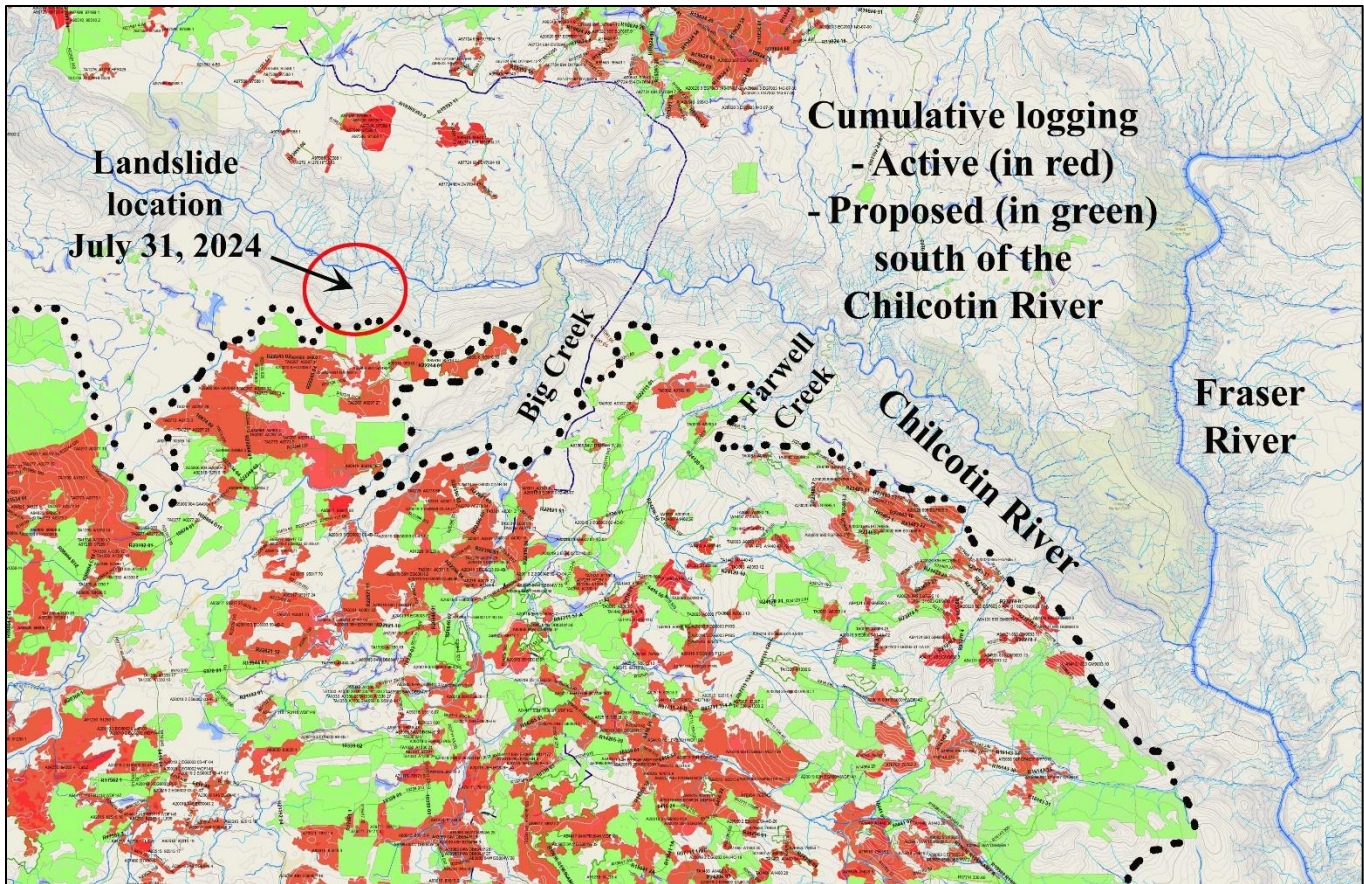




Close up of stream channel above slide (source: British Columbia province website, "EmergencyInfoBC")



Another related concern came to my attention while thinking about the Chilcotin River landslide. If the landslide was related to logging, that is from concentrated water flows redirected down toward the landslide area, or related increased groundwater seepages, are there other areas above the Chilcotin River that might face similar problems in the future, because of abrupt climate change intensifying rainstorm events? I then produced another map from IMAP BC, which might help me to weigh and determine this perspective.



What this recently generated map shows, are:

- the extensive, cumulative active and proposed commercial logging and road access locations on the south side of the Chilcotin River;
- reasonably close proximity of these activities near and above the Chilcotin River;
- that the location of the recent landslide (red circle) is perhaps the nearest such location to the Chilcotin River, and one of the only such locations adjacent to a very steep slope (contour lines);
- the cumulative impacts these cutblocks and roads, in addition to areas recently burned by fires, may have on the Chilcotin River complex by way of funneling rainstorm and snowmelt water events.

Finally, given the dire nature of this landslide and its serious repercussions, I believe it is important for the regional government, for the provincial government, and for the area's First Nations to immediately investigate the cause of the Chilcotin River landslide which includes an assessment of related logging above the site.

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Note: For those that may have downloaded my first, second, and third reports (August 2, 3, 4), I made updates. I found an error in my second report on the afternoon of August 4, after scrutinizing a photo taken from an aircraft, the only photo (shown here to the right, with the red outline) I could find showing both the upper plateau and landslide areas. I noticed that the standing forest on the plateau on that photo was different than the information that I had collected from IMAP BC. The error made was a misunderstanding of the provincial map layer cutblock category, “consolidated cutblocks,” which is different from the “active cutblocks” category. The “consolidated” shows both active and future cutblocks, and the other only “active.” I have made the appropriate corrections.

