

# Johnsons Landing in limbo until geotechnical report complete in spring 2013

by Jan McMurray

Many of the questions on the minds of the people of Johnsons Landing will remain unanswered until the geotechnical assessment is completed in spring 2013.

"The key step is the geotechnical report in 2013," said Jim Gustafson, Chief Administrative Officer at the RDCK, at an August 8 meeting to update the residents of Johnsons Landing on the recovery process. "There is a period of limbo that exists, and I encourage the community to establish its priorities so people's needs are met until the answers come." Gustafson suggested that the community form an 'unmet needs committee,' a model from the US that worked well in the Kerr Apartment fire.

Until the geotechnical report is complete in spring 2013, there will possibly be no change to the evacuation order area, which includes 12 properties or portions of properties, and the road to the lake will remain closed. Properties without driveway or road access are being looked at on a case by case basis.

Darrell Gunn of the Ministry of Transportation said the ministry has to focus on safety first. "We can't reconstruct a road to an area that is not safe. Safety, constructability and the probability of future events need to be determined from the geotechnical report," he said, pointing out that the road to the lake is right in the path

of the Gar Creek channel. He added that the ministry is doing some pre-planning in the meantime, looking at different options for the road.

YRB was applauded for its swift and excellent work repairing the access road into the community, and for the donation towards the community's temporary water system.

The cause of the slide and the chance of future slides were among the topics discussed at the meeting. Doug Nicol, senior geotechnical engineer from SNT Engineering Ltd. and head of the Johnsons Landing Landslide Technical Review Committee, told residents that they won't know the cause of the slide until further field work can be done. However, he said if there were any one cause, it would be the record rainfall in June. Although there were avalanches in Johnsons Landing this year and in 2003, Nicol said there doesn't seem to be a connection between the slide and the avalanches.

Peter Jordan, landslide expert with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) and member of the Technical Review Committee, explained that climate change complicates the predictability of future slides. "This was a one-in-100-years event based on past records. But rainfall in June was double the previous record. The climate is changing, so the historical record isn't stationary. That's a wild card in

everything we do," he said.

Jordan said that in general, the wetter the year, the greater the likelihood of landslides. This year, there were many times the number of incidents than the average. He said the probability of future slides in Johnsons Landing is probably low, but they don't yet know how low.

Nicol added that it is not a question of 'if' a slide will happen here in the future. "This is a historical slide area. Future slides will happen. The run-out modeling part of our work will try to answer the questions: How large? How infrequently? Where will they go?"

The run-out modeling and mapping is expected to be completed this fall, after areas higher up on the slide dry out enough to be safe for ground work.

Currently, the Technical Review Team, which consists of Nicol, Jordan, Dwain Boyer (landslide specialist and hydrologist with FLNRO) and Daryn Yonin (geotechnical engineer from Ministry of Transportation and Infrastructure in Nelson), is doing initial hazard mapping.

To develop the maps of the slide area, LIDAR (Light Detection and Ranging) technology was used. Nicol explained that with LIDAR, "you can get an accurate map as if no trees were there." The LIDAR maps show a very old and very big (much larger than this year's) landslide adjacent to the Gar Creek slide, as well as two smaller slides that are not quite as old

as the massive one.

Jordan said he did geological hazard mapping for the area 15 years ago. At that time, he saw a small area of the old, massive landslide. He did not deem it dangerous because nothing had moved for years, and he did not see the extent of the slide from the air photos. "It looked like mature forest from the air photos. With air photos, you can't see through the forest and with LIDAR, you can," he said.

He noted that the Province does not do systematic natural hazards mapping, and that this area has much better mapping than other areas because Bill Wells and Greg Utzig mapped it 30 years ago. Their maps did not detect the Johnsons Landing slide area, either.

"I think one thing that will come out of this is that the government will look more closely at hazard mapping. The politicians have promised this," said Jordan.

One resident asked what would happen if certain properties are deemed dangerous once the geotechnical assessment is done. Jim Gustafson said the RDCK will want to discuss this with the community and suggested they may want to deal with it through their Official Community Plan. He said that in other areas of the Regional District where there are geological 'hot spots,' building permits are not issued without a favourable engineer's report.

Gundula Brigl of Emergency

Management BC said that emergency funding may be available to people whose property is deemed a hot spot. She said this is evaluated on a case by case basis. "Different things have happened in different places around the province," she said, adding that she would connect the RDCK with North Vancouver and Oliver, where this has happened.

Gustafson reported that the Johnsons Landing event had taken 500 man hours of various RDCK staff, and the RDCK had authorized payment of \$330,000 to different contractors "to get where we are today." He explained that the RDCK does not provide the funding – the Province provides the funding through Emergency Management BC. "When emergency funds are identified, they come to the RDCK Emergency Operations Centre and the team in the EOC does an evaluation on it. We make the request to Gundula's organization [Emergency Management BC] and they approve the funding. Thanks to Gundula, the money flows and the contractors get paid," he said. "The RDCK is essentially a broker."