

Words of encouragement from the Big Bar Landslide First Nations Incident Commander

High noon on weather blessed Saturday July 20th I accompanied DFO and BC Wildfire staff on a 25 minute helicopter flight from the Incident Command Post (ICP) in Lillooet to the Fraser River rock slide incident site just north of the Big Bar ferry. The rock slide has formed a 15 foot (5m) waterfall which has become a partial obstruction for salmon returning to their natal streams.

As the helicopter circled the slide site I was overwhelmed to see the magnitude of the incident. Salmon could be seen below the newly formed falls resting to gain enough energy to try the extreme jump for who knows how many times already ventured. Rock scalers above the tranquil salmon were doing their best to prep the site for upcoming rivers edge rock movement operations to create a natural rock ladder out of large boulders. The boulder ladder's purpose is to provide resting pools so salmon can gradually jump from one step to another, and finally into the relatively calmer waters above the slide where they can continue the spawning journey.

We dropped back and landed on the sandy beach safely below the slide. It was very commendable to see First Nations, land owners, and Provincial and Federal organizations all collaborating to build a holding pond designed to capture and hold salmon for trap and transport to above the falls. After quick introductions with the Northern Shuswap Tribal Council fisheries technicians and the land owner I silently approached the river alone, opened my medicine pouch, and pulled out a tobacco offering for the salmon. My prayers for the struggling salmon flowed like tears as the offering washed through my fingers into the river of life. I leaned over and picked up a flat grandfather stone the size of my palm.

Grandfather Stone in my Secwepemc (Shuswap) culture is lava rock which is revered for its spiritual importance in the traditional sweat lodge. These ancient stones are heated to a red hot glare then brought into the sweat lodge where water is poured on them to create the cleansing steam that will purify the body, mind and spirit. Traditional chants and drum songs call the ancestors and spirit guides into the sweat lodge to pray with us.

Our prayers will help some of the strong salmon get through the slide, but it's the collaborative partnerships of the Incident Command Post and field crews that will put into place the structures to aid in salmon passage for the masses yet to come. Some say let the Creator take care of it. I say let the Creator take care of us while we give Mother Nature a helping hand like she does for us.

All My Relations

Greg Witzky

FRAFS Operations Manager / Big Bar Slide First Nations Incident Commander





Fraser River Salmon



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The Big Bar Landslide has raised concerns over the possibility of potential losses to critical salmon runs of the Fraser River as it is partially obstructing salmon from migrating upstream to their spawning beds. Millions of salmon migrate up the Fraser River every year and it is imperative to the species success. Currently, both the sockeye and chinook salmon are starting to make their way up the Fraser River to their spawning grounds, with Coho salmon migrating later in the summer and fall period.

Chinook Salmon

- Chinook salmon are the largest Pacific salmon species and, on average, grow to be three feet (0.9 meters) long and approximately 30 pounds (13 kilograms). Because of their large size and strength, Chinook salmon are one of the most sought after recreational fish species on the west coast.
- While still feeding in tidal waters, the chinook has a dark back, with a greenish blue sheen. As they approach fresh water to spawn, the body colour darkens and a reddish hue around the fins and belly develops. The teeth of adult spawning males become enlarged and the snout develops into a hook.
- Chinook spawn in large rivers stretching from California to Alaska, mainly in major river systems, but the most important of which is the Fraser River.
- After hatching, chinook remain in fresh water for varying lengths of time depending on water temperature. In southern areas, some migrate vast distances and are found sparsely distributed throughout the Pacific Ocean. The age of chinook adults returning to spawn varies from two to seven years.



Chinook Salmon

Sockeye Salmon

- The best known Pacific salmon, sockeye, are the most sought after for their superior flesh, colour and quality.
- The main spawning area of sockeye salmon extends from the Fraser River to Alaska. Most sockeye in BC spawn late summer or fall in lake-fed systems.
- Young sockeye remain in their freshwater nursery lakes for a year or more, with some waiting until the second or third year to make their journey to the Pacific Ocean. Once in salt water, BC sockeye move north and north-westward along the coast.
- In many of the lakes of the Fraser River in particular, sockeye are abundant every four years.
- Ocean-going sockeye are silver in colour, with small black speckles along the body. As sockeye make their way to fresh water, they turn varying shades of red— resulting in a brilliant scarlet fish with a green head by the time they have arrived at their point of natural origin.



Sockeye Salmon



Information Bulletin: Controlled Blasting Operation



Scaling crews are continuing to remove dangerous rocks on the face of the landslide to provide safe working conditions and to avoid a landslide from occurring in the future. This afternoon a larger piece of overhanging rock will be removed through controlled blasting. This rock was not able to be detached through the variety of hand tools used on the cliff face.

Blasting preparation follows detailed instructions from blasting specialists. Preparation consists of the rock scaling crew carefully drilling 50 holes into the rock that are approximately 20 feet deep and two and a half inches in diameter in predetermined locations. The detonators are non-toxic. These holes, as shown in figure one and two, have been carefully designed to restrict the size of rocks that will detach, which prevents harming fish that may be below.

The blasting team consists of qualified experts who specialize in executing controlled detonations in a safe and contained manner. This process will only remove the minimum amount of rock required while preserving as much of the natural land as possible. First Nations continue to assess all areas to ensure archeological values are protected. The integration of aboriginal interests into all aspects of operations remains a priority.

Transport Canada has closed a small section of the Fraser River in the immediate blast area. Conservation and protection officers will be located both upstream and downstream of the blasting location to ensure that there is no vessel traffic. Once blasting has concluded and a safe working area is established, personnel will be able to implement additional actions.

Please keep in mind that the controlled detonations will emit a noise that may be heard in nearby areas.



Figure 1. Holes drilled by scaling crews.

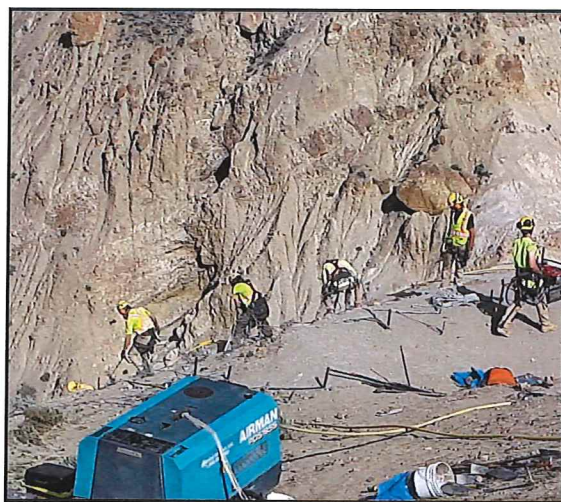


Figure 2. Scaling crews drilling holes to prepare for the controlled blasting operation.