

1 Q. **Upgrade Public Safety Around Dams - Hinds Lake and Paradise River**

2 Please provide evidence of the numbers of members of the public (ie persons other than  
3 employees or contractors of Hydro or Nalcor) who, annually, come within sufficient proximity of  
4 these facilities to be at risk, and please detail the risk to which those persons were exposed.

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7 A. The Public Safety Around Dams (“PSAD”) Guidelines were released in 2011 by the Canadian Dam  
8 Association (“CDA”) as a component of the existing CDA Dam Safety Guidelines. These  
9 guidelines are considered best industry practice and have been adopted by Newfoundland and  
10 Labrador Hydro (“Hydro”) as well as incorporated into Hydro’s Dam Safety Program. As part of  
11 the PSAD site risk assessment process, dangerous and warning zones are delineated around  
12 hydroelectric structures and public interactions within these zones are determined. Prior to the  
13 release of the PSAD guidelines in 2011 there were no records kept of public interactions,  
14 therefore anecdotal evidence such as soda cans, water bottles, firepits, etc. were used to  
15 indicate public activities at each site. In 2014, Nalcor Energy (“Nalcor”) added a means for  
16 employees and contractors to submit any public activities observed in and around our dams and  
17 hydraulic structures using the corporate Safe Workplace Observation Program (“SWOP”)  
18 system. Since 2014, Nalcor has recorded 74 public interactions within the dangerous/warning  
19 zones of hydroelectric facilities including dams, gates, tailraces, etc. Many of these sites are  
20 remotely operated with minimal employee on-site presence. As such, the recorded SWOP  
21 observations outlining the public activity around the dams is considered to be a fraction of what  
22 is actually occurring at the sites. The following are examples of the type of public activities  
23 observed by Nalcor personnel around the dams:

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- 25 • Pleasure craft (boats, kayaks, jet skis) upstream and downstream of operating gates. When  
26 gates are operational, water velocities are increased near the gates; boats, kayaks, etc. can  
be drawn into the gates.

- 1       • Public walking across a concrete overflow spillway dam. Concrete overflow dams can spill
- 2       without warning and walkers can be swept downstream of the dam.
- 3       • Snowmobiling on ice near spillways where ice is weak or broken due to spill operations.
- 4       • Fishing near low head concrete weirs where turbulence can trap a person or boat against
- 5       the downstream face of the dam.

6       Table 1 lists some of the SWOP-recorded public activities that are considered to be near misses  
7       and thus are leading indicators of the potential for a serious incident.

**Table 1: SWOP-Recorded Near Miss Public Activities**

Year	Description of Condition	Outcome
2015	An overturned boat was found downstream of the Millertown dam. The boat was known to be kept upstream of the dam.	Incident was raised with Search and Rescue. Concluded that the boat went through the flowing spill gate at Millertown with no one inside the boat.
2016	Boat carrying a family came close to the upstream side of the Millertown dam while the gates were open.	Boat operator did not realize gates were open and called Hydro to report the incident. PSAD signs were installed afterward.
2017	Two fisherman were observed downstream of Ebbegunbaeg control gates within 5 metres of the gates. The fisherman passed multiple PSAD signs to fish in the area. Many fisherman frequent this area each year.	Employees discussed the dangers of fishing close to a remotely operated gate and the fisherman continued to fish in the same location.
2018	Downstream of Gabbro spillway gates, a snow machine was observed stuck and abandoned in slob ice.	The snow machine operator had to pass multiple PSAD signs warning of ice and fluctuating water levels as well as ignore weeks of public announcements warning of the conditions downstream of gates.
2018	A camper van was found partially submerged in one of the reservoirs in Churchill Falls.	Reservoir levels had risen higher than usual but within operating range. The camper was parked close enough to the reservoir to be partially submerged with rising levels and was not occupied at the time.

<b>Year</b>	<b>Description of Condition</b>	<b>Outcome</b>
2019	Adventure tour operator using Grand Falls powerhouse tailrace as entry point for tours.	A letter was sent to the operator outlining the dangers and PSAD signage was installed. The tour operator has not altered entry location.
2020	Two adults and four children were observed fishing from a boat directly downstream of Lobstick control gate structure (CF). The boaters bypassed PSAD signage to get to area.	The boaters bypassed PSAD signage and entered the dangerous zone downstream of the gate. An employee discussed the dangers of being in such close proximity to the gates and the boaters remained in the area.

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