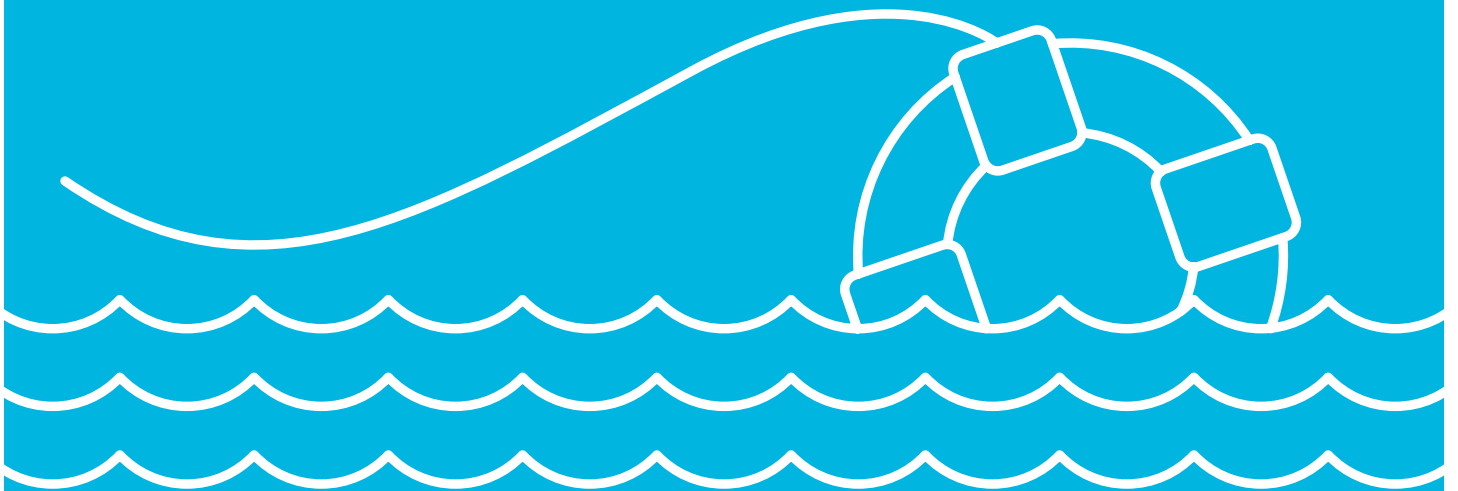


Risk and recreation:

British Columbians not as prepared
for the water as they think



Report
July 2020

BCH2O-582

 **BC Hydro**
Power smart

Risk and recreation: British Columbians not as prepared for the water as they think

With COVID-19 travel restrictions in place, more British Columbians are expected to be vacationing closer to home, with many visiting BC Hydro's recreation areas to enjoy the water. In recent years, BC Hydro has recorded an increase in drownings and near drownings at its recreation sites, some of which could be attributed to British Columbians overestimating their experience in the water and taking unnecessary risks in pursuit of summer fun.

Highlights

- New BC Hydro data shows that there has been an increase in drowning and near drowning incidents in recent years at its recreation sites.
 - The two recent drownings at its Buntzen Lake recreation site were the first in over a decade.
- Results from a new survey¹ conducted on behalf of BC Hydro indicate some British Columbians are overestimating their ability in the water and not as prepared as they would like to think.
 - While 85% of British Columbians rate themselves as experienced swimmers, the majority are not swimming often, with only 63% finding themselves in the water a few times each summer.
 - Further, about 85% have not completed a formal swimming lesson in more than 10 years and an additional 10% indicate they have never completed a single lesson.
- This lack of practice could be the reason why almost 30% of British Columbians say they have had a near drowning experience and 53% have witnessed another person in the water in distress.
- It could also be because many admit to engaging in risky behaviour:
 - Nearly 50% confess to going in the water under the influence of alcohol or marijuana.
 - About 20% admit to swimming in areas they knew they were not supposed to be in.
 - More than 40% of parents acknowledge being somewhat distracted when their children are in the water.
 - Many admit to not using personal flotation devices when participating in their favourite water activities, including 24% of boaters, 27% of kayakers, 28% of canoers and 58% of tubers.
- And, with all of these unsafe actions, only about half of British Columbians have had basic first aid training at some point in their lives.

Solutions

- When visiting BC Hydro recreation sites, BC Hydro recommends:
 - Avoiding a false sense of security. BC Hydro has introduced lifeguards at its most popular recreation sites—Buntzen and Hayward lakes—but it is up to each visitor to read safety signage and keep out of potentially hazardous areas.
 - Never leaving children unsupervised while in or near the water. Children and non-swimmers should always wear a personal flotation device.
 - Watching for changes in the weather and checking the forecast before starting out on the water.
 - Providing an approved personal flotation device—even an inflatable model—for everyone in a boat or canoe.
 - Understanding many of the lakes in its recreation facilities are cold enough to cause serious harm. Cold water reduces body heat 25 times faster than air does at the same temperature.
 - Keeping out of the water if under the influence of drugs or alcohol—they affect judgement and reaction time.
 - Staying outside of safety booms and buoys, and away from all dam structures.

1. Online survey conducted by Majid Khoury of 600 British Columbians that swim outdoors and or trail walk/hike between June 18 and 22, 2020

Water-related safety incidents on the rise

Each summer, British Columbians get out and explore the province. With COVID-19 travel restrictions still in place, a survey conducted on behalf of BC Hydro found about 70% of British Columbians are planning staycations or holidays within the province.

BC Hydro manages 19 recreation sites at its reservoirs across the province—from northern B.C. and the Southern Interior, to Vancouver Island and the Lower Mainland. Recreation sites are used by about 2 million visitors year-round for trail walking, hiking, boating, camping and swimming. Summer is the busiest season at these recreation sites, and BC Hydro has witnessed a concerning rise in safety incidents in recent years.

This report explores how recent safety incidents at BC Hydro's recreation sites could be tied to British Columbians overestimating their swimming abilities along with participating in other risky behaviours.

Drownings and outdoor swimming

Each year, there are hundreds of water-related fatalities across Canada. According to a report conducted for Lifesaving Society Canada, recreational activities account for the majority of drowning deaths in Canada—an average of about 258 per year.² Statistics from a BC Coroners Service report³ support this, noting a spike in accidental drowning deaths each summer. These numbers begin to increase in May and continue to rise through August.

New BC Hydro data tells a similar story. Water-related safety incidents are the leading cause of death at its recreation sites with two drownings recorded in the last two years. Both of these drownings occurred in 2018 at Buntzen Lake near Port Moody, BC Hydro's most popular recreation site. The drownings were the first in over a decade.

Most BC Hydro recreation sites are located on or near the reservoirs that hold the water behind the dams it uses to generate power, which means water levels can change quickly in response to power demand in the province.

Swimming in an uncontrolled environment such as a lake or river is much more dangerous than in a controlled environment, such as a pool because of the currents, sudden temperature changes and drop points, and unpredictable weather. In fact, data from the Lifesaving Society shows the majority of drowning fatalities—about 70%—in Canada last year occurred in natural bodies of water.⁴

Close calls and risky behaviours

The statistics are clear. Overestimating your swimming abilities, using drugs or alcohol, swimming in non-designated areas and not keeping a constant eye on children are the most significant factors in drowning incidents.

Close calls for these types of incidents are more common than many think. In fact, the survey found almost 30% of British Columbians have come close to drowning while recreating on or near the water at some point in their lives. In addition, 53% have witnessed another person in the water in distress.

Statistics from the report by the BC Coroners Service show that four times as many men die from accidental drowning when compared to women.⁵ A new survey conducted on behalf of BC Hydro supports these results with 40% more men than women admitting to coming close to drowning. In addition, the survey found those living on Vancouver Island have had more near drowning experiences than those living in other parts of the province.

2. Lifesaving Society – Canadian Drowning Report

3. BC Coroners Service report

4. Lifesaving Society – Canadian Drowning Report

5. BC Coroners Service report

Overconfidence in swimming abilities

The survey conducted for BC Hydro suggests one reason for the high number of safety incidents in natural bodies of water could be attributed to many overestimating their swimming abilities in this type of environment. For example, while 85% of British Columbians that swim outdoors rate themselves as experienced swimmers, the majority are not swimming often, with more than 60% only going in the water a few times each summer.

While Lower Mainlanders consider themselves the most experienced swimmers in the province—only second to Vancouver Islanders, they are actually the least likely to swim in the summer months, with 80% indicating they only go swimming a few times. Residents in the North also rank themselves as experienced; however, more than 70% are only swimming outside a few times each summer.



85%

rank themselves as experienced despite 60% admitting they don't swim more than a few times each year



The survey also found that for many, it has been quite a while since they brushed up on their swimming skills. About 85% of British Columbians have not taken swimming lessons in over a decade and almost 10% have not completed swimming lessons at all.

The lack of experience and regular swimming practice found in the survey conducted for BC Hydro was echoed in findings from the Red Cross. The Red Cross⁶ found nearly 55 per cent of Americans cannot swim or perform the basic swim safety skills—and almost 25 per cent overestimate their abilities in the water.

Under the influence leads to under the water

The survey conducted on behalf of BC Hydro found that nearly 50% of British Columbians have gone into the water under the influence of alcohol or marijuana. And of those, men are 30% more likely to be under the influence than women when swimming.

Northern residents are the most likely to consume alcohol or use marijuana before swimming. In fact, they are about 20% more likely to do so than people living in the Okanagan or the Kootenays.

Using drugs or alcohol can greatly increase the chance of accidental drowning. According the BC Coroners Service report, alcohol and/or drugs contributed to 40% of drowning deaths between 2008 and 2015.



50%

of swimmers have consumed alcohol or marijuana before swimming

Swimming out of bounds

In addition to using drugs or alcohol before entering the water, about 20% British Columbians admit to swimming in areas they know they are not supposed to be in. The survey found residents of Vancouver Island, the Okanagan and the Kootenays were the most likely to swim in areas they should not be in. And once again, men are 70% more likely than women to swim in areas they should not be in.

This is especially dangerous at BC Hydro's recreation sites. Many of these sites are located on working reservoirs—meaning there are dam structures that can be dangerous if signage is not obeyed and distance is not maintained. There are also water-level fluctuations and extremely cold water temperatures at many of the sites.

⁶. Red Cross

Don't look away—even for a moment

Drowning is the second most common cause of death for children under five years of age in Canada, and the majority of these happen between the Victoria Day long weekend and the Labour Day long weekend. Many incidents are the result of brief or even momentary inattention by caretakers.

When it comes to keeping kids in B.C. safe near the water, many British Columbians report not paying closer enough attention. The survey found Don't look away—even for a moment

Drowning is the second most common cause of death for children under five years of age in Canada, and the majority of these happen between the Victoria Day long weekend and the Labour Day long weekend. Many incidents are the result of brief or even momentary inattention by caretakers.

When it comes to keeping kids in B.C. safe near the water, many British Columbians report not paying closer enough attention. The survey found more than 40% of parents acknowledge being somewhat distracted when their children are in the water. Younger children can drown silently in as little as 25 seconds—even in very shallow water.

Lifesaving skills

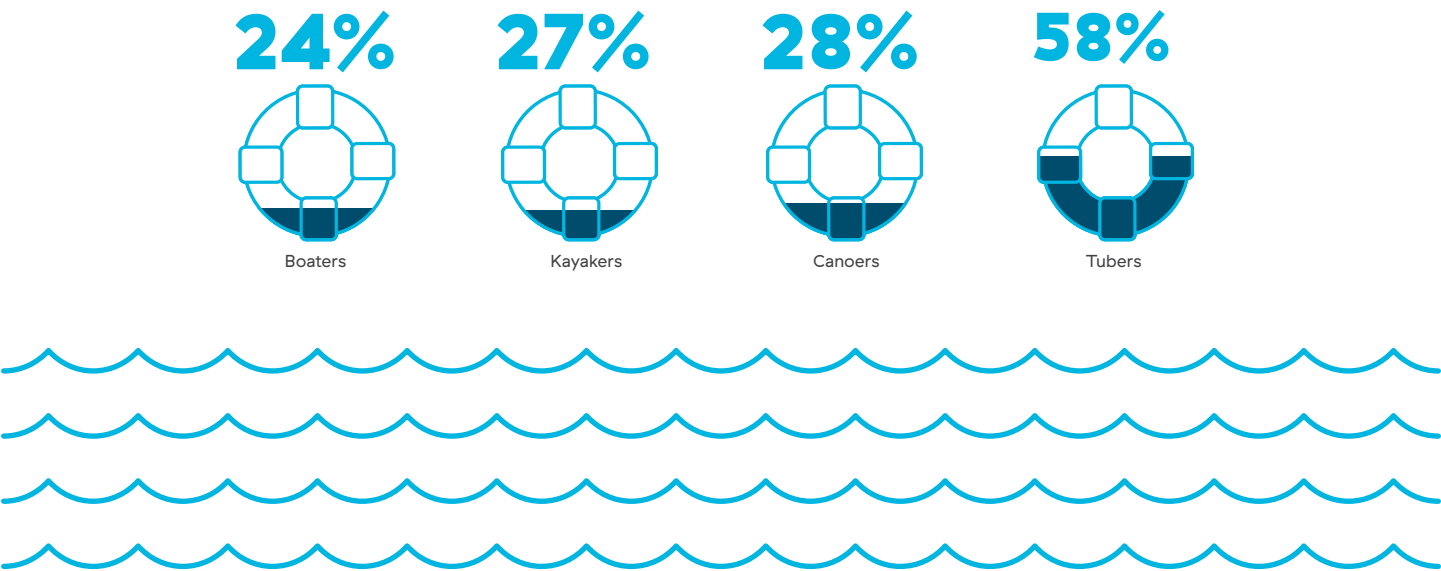
With all of these dangerous activities, only about half of British Columbians have had basic first aid training at some point in their lives. Northerners are the most likely to have first aid and the vast majority know CPR. However, those in the Lower Mainland are the least likely to have a first aid certificate or basic training, and 30% do not know CPR.

Swimmers aren't the only ones taking risks

Next to swimming, boating is one of the riskiest water-related activities at BC Hydro recreation sites. Not only can water levels change quickly, but there are man-made and natural hazards to watch out for, including safety booms, buoys and floating debris.

The Lifesaving Society has determined that wearing a personal floatation device is the most effective way to reduce boating-related drownings in Canada.⁷ Drowning statistics consistently show 80% of victims in boating-related drownings were not wearing a personal floatation device. Still, many British Columbians admit to not using personal flotation devices when participating in their favourite water activities, including 24% of boaters, 27% of kayakers, 28% of canoers and 58% of tubers.

Northern residents are the most likely to wear a personal floatation device while residents of the Kootenays and Okanagan are the least likely.



7. Lifesaving Society

Lifesaving solutions

Last year, BC Hydro had the Lifesaving Society of BC conduct a comprehensive safety audit of the swimming areas at its most popular recreation sites—Buntzen and Hayward lakes. As a result of the recommendations from the audit, designated swimming areas were installed at Buntzen and Hayward lakes. These recreation areas were also the first public beaches in B.C. to offer outside lifeguard services this year.

With safety as a top priority for BC Hydro, safety plans at its recreation sites are reviewed annually. BC Hydro has increased staffing levels at Buntzen and Hayward lakes to ensure public safety during the busy summer months.

Additional improvements include more safety signage with internationally recognized symbols and pictures and increased markings of hazards in and around swim areas, such as drop offs.


























































































































Research from the Lifesaving Society indicates that fewer drowning deaths—less than 1%—occur in lifeguard-supervised settings, such as public pools and waterfronts. While lifeguards can help improve public safety, they should not be relied on in place of sound personal judgment and preparation for potential hazards.

When visiting BC Hydro recreation sites, BC Hydro also recommends:

- Never leaving children unsupervised while in or near the water. Children and non-swimmers should always wear a personal flotation device.
- Watching for changes in the weather and checking the forecast before starting out on the water.
- Providing an approved personal flotation device—even an inflatable model—for everyone in a boat or canoe.
- Understanding many of the lakes in its recreation facilities are cold enough to cause serious harm. Cold water reduces body heat 25 times faster than air does at the same temperature.
- Staying out of the water if under the influence of drugs or alcohol—they affect judgement and reaction time.
- Keeping outside of safety booms and buoys, and away from all dam structures.

For more information on BC Hydro recreation sites, visit bchydro.com/recreation.

BC Hydro recreation sites by region

Northern Region													
Alexander Mackenzie's Landing boat launch													
Alexander Mackenzie's Landing campground													
Clayton Falls													
Peace Canyon Dam Viewing Area													
Williston Reservoir													
Southern Region													
Arrow Lakes Reservoir													
Bridge River													
Gun Creek Campground													
Naxwit Picnic Area													
Seton Lake Reservoir													
Kootenay Canal													
Pend d'Oreille boat launch													
Pend d'Oreille campground													
Shuswap River													
Sugar Lake Dam Viewpoint													
Lower Mainland													
Buntzen Lake													
Buntzen Lake Trails													
Hayward Lake Reservoir													
Jones Lake Reservoir													
Ruskin Dam													
Stave Lake Reservoir													
Reservoir Boat Launch													
Lodge and Campsite													
Vancouver Island													
John Hart													
Puntledge River													
Strathcona Dam	