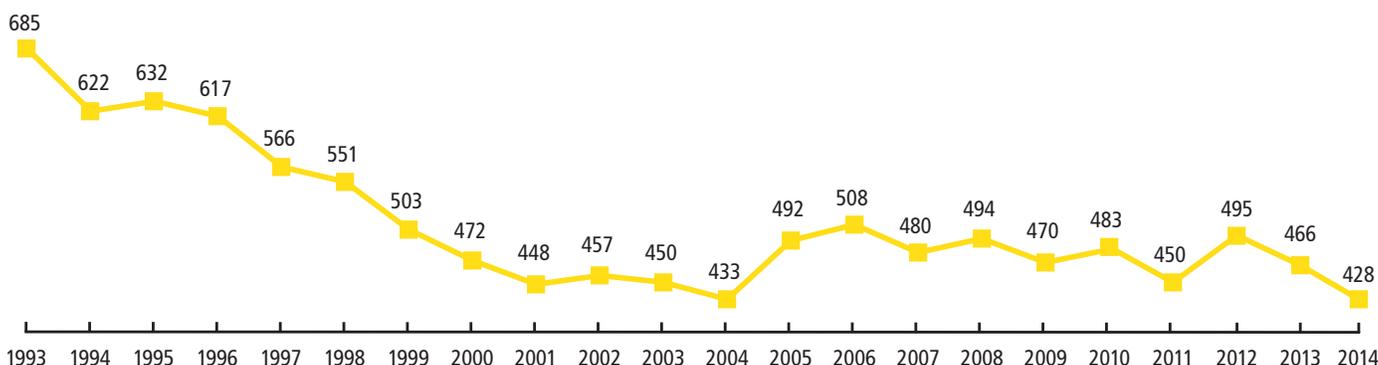


# DROWNING REPORT

Prepared for the Lifesaving Society Canada by the Drowning Prevention Research Centre

## Canadian Totals 1993 - 2014

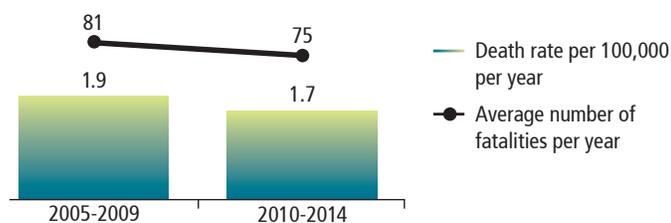


According to the most recent data available from the Coroner's office of British Columbia, 66 water-related fatalities occurred in 2014. This number is substantially lower than the average 75 drowning deaths in 8 of the 10 most current years. The 2014 fatalities resulted in a lower than average drowning death rate of 1.4 per 100,000.

### Preliminary interim data

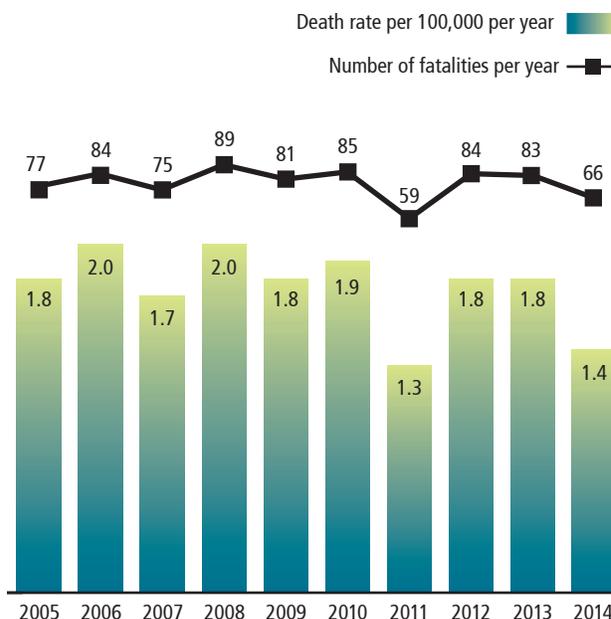
For drowning deaths since 2014, only preliminary, interim data from media and internet reports are available. In British Columbia, these numbers indicate that at least 67 drowning deaths occurred in 2015 and at least 56 occurred in 2016.

## British Columbia Water-Related Fatalities and Death Rates, Five-Year Averages



Looking at the most current five-year period (2010-2014) as a whole, the drowning death rate has decreased 11% from the previous five-year period (2005-2009). The average yearly drowning rate was 1.7 per 100,000 in 2010-2014, down from 1.9 per 100,000 in 2005-2009. In addition to the lower than average number of drowning deaths in 2014, this decrease can be partially attributed to an unusually low number of drowning fatalities (59) in 2011, the lowest in all ten years. A total of 377 water-related fatalities occurred in British Columbia waters between 2010 and 2014.

## British Columbia Water-Related Fatalities and Death Rates 2005-2014



# WHO is drowning?

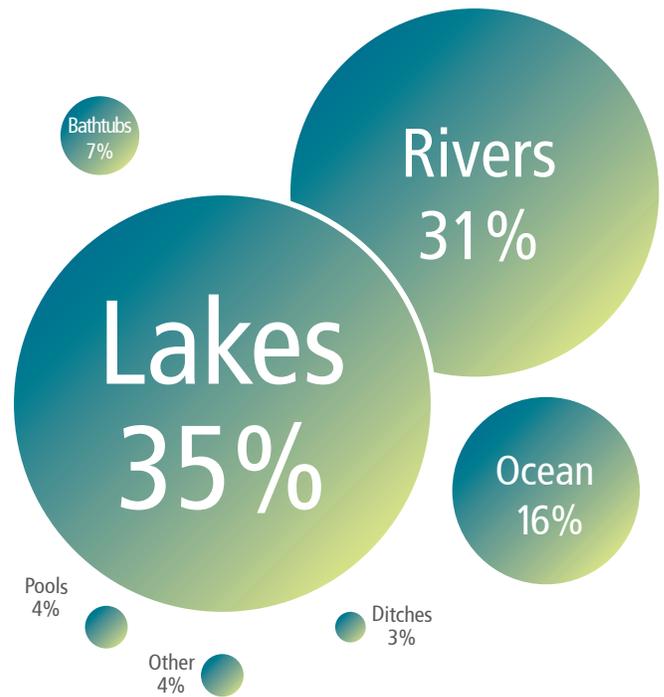
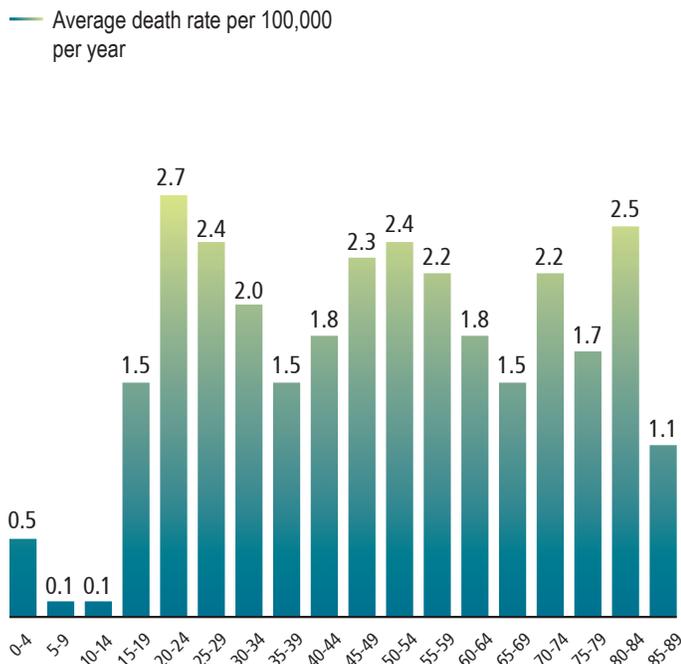


The majority (79%) of British Columbia drowning victims continue to be male. This is consistent with the national trend in which 8 out of 10 fatal drowning victims in Canada are male. Between 2010 and 2014, the average water-related fatality rate for men in British Columbia was 2.6 per 100,000 population, compared to 0.7 for women. In 2014, 52 males (79%) and 14 females (21%) died by drowning.

By age, drowning death rates remain consistent with those reported in the last *British Columbia Drowning Report*. The highest drowning rates in 2010-2014 were once again found among young adults aged 20-34, with 20-24-year-olds having the highest death rate of all age groups (2.7 per 100,000). High drowning rates were also found among middle-aged adults in their late forties and fifties. Adults 50-54 years of age had the highest death rate in this group at 2.4 per 100,000 population. A high death rate was also reported for seniors 80-84 (2.5 per 100,000 population).

Water-related fatality rates remain relatively low among children in British Columbia. In 2010-2014 the drowning death rate for children 0-4 and 5-14 years of age were 0.5 per 100,000 and 0.1 per 100,000 respectively. These rates are substantially lower than the national averages of 1.1 and 0.4 for these age groups.

## Water-Related Death Rate By Age, 2010-2014



## WHERE are they drowning?

In the 2010-2014 period, natural bodies of water (82%) once again accounted for the majority of drowning deaths in British Columbia. Lakes were the most common location (35%) followed by rivers and streams (31%), and the ocean (16%). Fewer drowning deaths occurred in man-made settings such as bathtubs (7%), pools (4%), and ditches (3%). In 2014, 24 people drowned in a lake (36%), 23 people drowned in rivers and streams (35%), and 9 people drowned in a man-made setting such as a bathtub, pool, or ditch (14%).

Drowning fatalities in lifeguard supervised settings continue to be rare: in 2010-2014 less than 1% of drowning deaths in British Columbia occurred under lifeguard supervision.

Consistent with previous years, just over half (57%) of 2010-2014 water-related fatalities occurred in urban areas and just under half (43%) occurred in rural areas. By comparison, approximately 86% of the population in British Columbia lives in an urban area. By district, the greatest number of drowning fatalities in 2014 occurred in Metro Vancouver (17%), followed by Central Kootenay (14%).

# WHEN are they drowning?

The warmer months continue to account for the majority of drowning fatalities in British Columbia. In the 2010-2014 period, 60% of water-related fatalities occurred in May through August. July (17%) was the most common month in which drowning deaths occurred followed by June and August (16% each). In 2014, more drowning deaths occurred in June (17%) than any other month, and fewer than average occurred in July (14%) and August (11%).

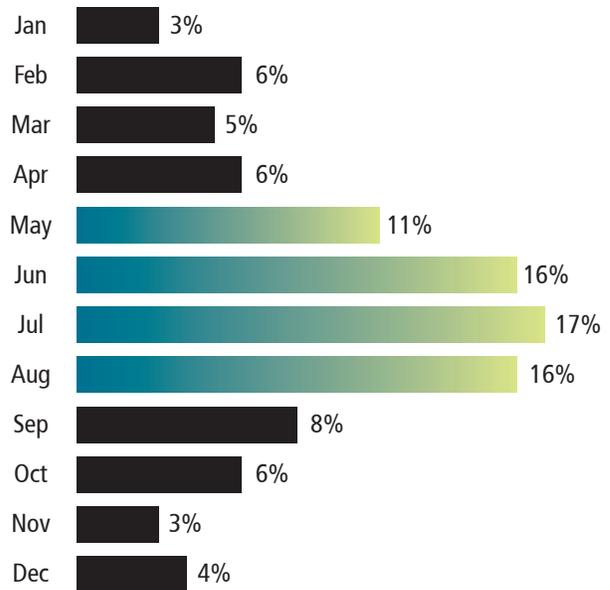
Once again, over half (57%) of all drowning deaths in 2010-2014 happened on the weekend (Friday, Saturday or Sunday). In 2014, water-related fatalities most frequently occurred on a Saturday (32%). Double the number of drowning deaths occurred on Saturday than any other day.

# WHAT were they doing?

Recreational activities accounted for two thirds (66%) of drowning fatalities in British Columbia in 2010-2014. Consistent with previous years, the most common primary recreational activity was swimming (18%), followed by fishing (15%), and powerboating (13%). In 2014, 46 people (70%) drowned while engaged in a recreational activity: 9 were swimming (20%), 5 were fishing (11%), and 6 were powerboating (13%).

Daily living incidents continued to account for a high (27%) proportion of water-related deaths in British Columbia in 2010-2014. The most common daily living activities were motor vehicle travel (42%),

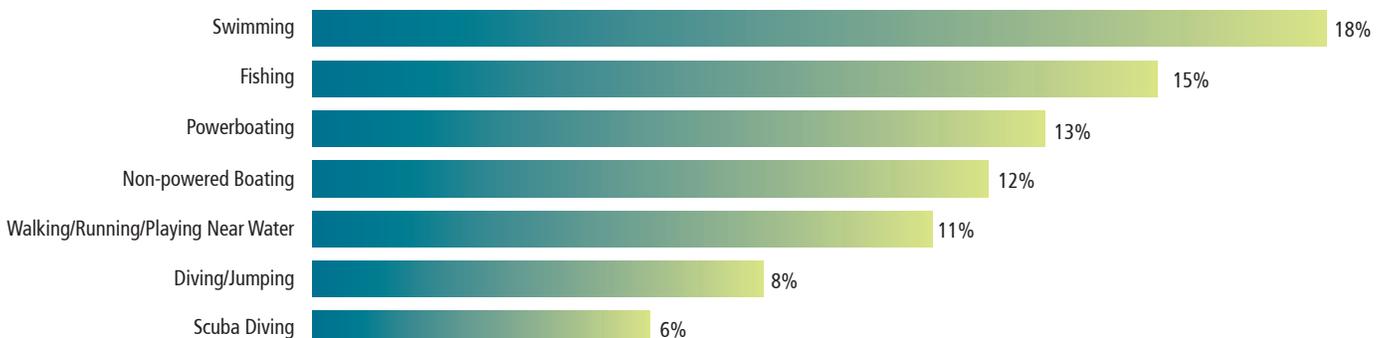
## Water-Related Fatalities by Time of Year, 2010-2014



bathing (25%), and travel on foot (19%). In 2014, 15 people drowned during a daily living activity, and over half of these (53%) occurred during motor vehicle travel.

By type of activity, boating (32%) continued to account for the greatest proportion of water-related fatalities in 2010-2014, followed by aquatic activities (27%). Other frequent activity types were non-aquatic activities (18%), and land, ice or air transportation (14%). In the 119 boating incidents that occurred in British Columbia between 2010 and 2014, the most common vessels involved were powerboats (55%), followed by canoes (15%) and inflatable crafts (9%). The most frequent types of boating incidents were falling or being thrown overboard (36%) and capsizing (33%). Once again lifejacket use and alcohol consumption were factors in many of the boating fatalities. Only 13% of victims were wearing a lifejacket properly at the time of the incident and approximately 39% had consumed alcohol.

## Water-Related Fatalities by Most Common Recreational Activity, 2010-2014



# Risk factors

The major risk factors contributing to water-related fatalities in British Columbia in 2010-2014 continue to be consistent with those the Lifesaving Society has identified for the national population in the past.

## Boating

Not wearing a PFD (74% of cases where known)  
Alcohol consumption (39%)  
Falling overboard (36%)  
Capsizing (33%)  
Boating alone (30%)

## Swimming

Swimming alone (33%)  
Poor swimming ability (24%)  
Alcohol consumption (20%)

## Age

### <15

Alone or with other minors only (70%)

### 15-19

Not wearing a PFD when relevant (100% of cases where known)  
Alcohol consumption (58%)  
Alone (21%)

### 20-34

Not wearing a PFD when relevant (73% of cases where known)  
Alcohol consumption (44%)  
Alone (30%)  
After dark (28%)

### 35-64

Not wearing a PFD when relevant (65% of cases where known)  
Alone (43%)  
Alcohol consumption (41%)  
Twilight or after dark (26%)

### 65+

Alone (74%)  
Not wearing a PFD when relevant (69% of cases where known)  
Alcohol consumption (21%)

# In summary

The water-related fatality rate in British Columbia decreased in 2014. Consistent with previous years, the highest drowning rates were found among men, young adults, and middle-aged adults.

Drowning deaths were most likely to occur during the summer, on weekends, and in natural bodies of water such as lakes, rivers, and the ocean.

The highest proportion of incidents occurred during a recreational activity; the most common of these were swimming, fishing, and powerboating.

Despite the recent decrease in the drowning rate, 377 people lost their lives in preventable water-related fatalities in British Columbia from 2010-2014. This reinforces the need for continued strong drowning prevention efforts.

## Research methodology

### Complete data from 2005-2014

The drowning research process involves data collection, research tabulation, and analysis. Water-related death data is extracted from the Office of the Chief Coroner of British Columbia. The scope of this research:

- collects the data needed to profile victims of aquatic incidents, including the circumstances and contributing factors under which these incidents occurred.
- includes all deaths in British Columbia resulting from incidents "in, on or near" water; "near-water" incidents were included if the incident was closely related to water-based recreational, vocational or daily living activity, or if the presence of water appeared to be an attraction contributing to the incident.
- includes only unintentional deaths, not deaths due to natural causes, suicide, or homicide.

### Interim data

Complete final data on more recent drownings and other water-related deaths are not yet available from the Office of the Chief Coroner. The interim, preliminary data are derived from media releases, media clippings, news reports and internet searches.

## Acknowledgments

We gratefully acknowledge the support, co-operation and efforts of:

- The Office of the Chief Coroner of British Columbia which permitted and facilitated confidential access to reports on preventable water-related deaths.
- The volunteers who contributed their time and energy including data extraction on preventable water-related deaths from coroners' files.
- Tessa Clemens who was primary author and data analyst for this report and Lucie Simoes who provided data input and verification.

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## Drowning Prevention Research Centre Canada

The Drowning Prevention Research Centre is the lead agency for drowning and water-incident research in Canada. The Centre conducts research into fatal and non-fatal drowning, significant aquatic injury and rescue interventions.

Contact Barbara Byers, Research Director,  
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## The Lifesaving Society

The Lifesaving Society – Canada's lifeguarding experts – works to prevent drowning and water-related injury through its training programs, Water Smart® public education, aquatic safety management, drowning research and lifesaving sport. Annually, over 1,000,000 Canadians participate in the Society's swimming, lifesaving, lifeguard and leadership training programs. The Society sets the standard for aquatic safety in Canada and certifies Canada's National Lifeguards.



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