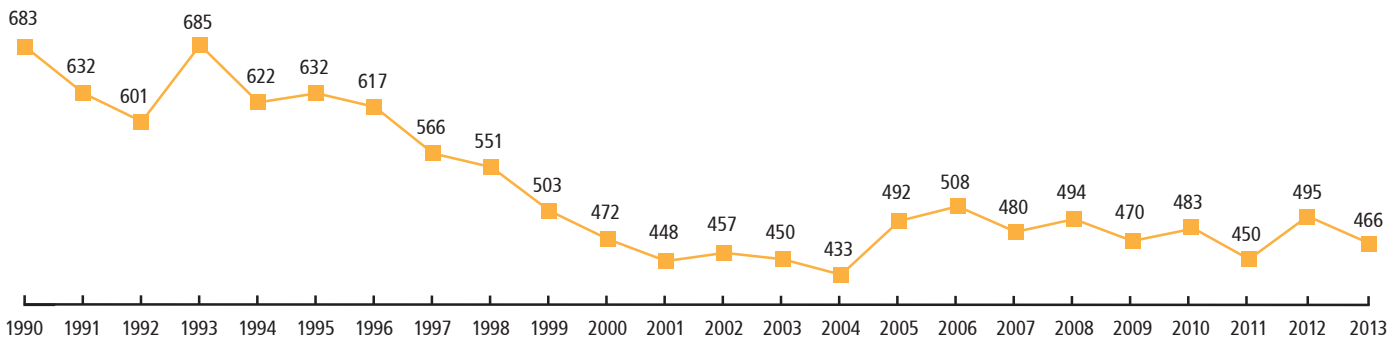


DROWNING REPORT

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

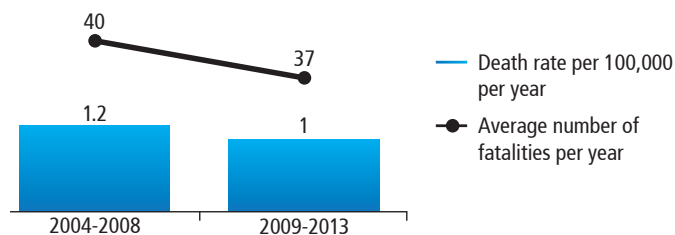
Canadian Totals 1990 - 2013



Analysis of the most recent data available from the Office of the Chief Medical Examiner of Alberta reveals that despite a steady increase in the number of drowning deaths over the past few years, the water-related fatality rate remains lower in 2009-2013 as a whole than in the previous five-year period. The average yearly death rate from drowning in this most current data was 1.0 per 100,000 population, down 19% from 2004-2008. The drowning rate is also lower than that of Canada as whole (1.4 per 100,000).

in 2013 is associated with an increase in the number of incidents that occurred during activities of daily living such as bathing and motor vehicle travel. Between 2009 and 2013, a total of 183 people lost their lives as a result of unintentional drowning in Alberta waters.

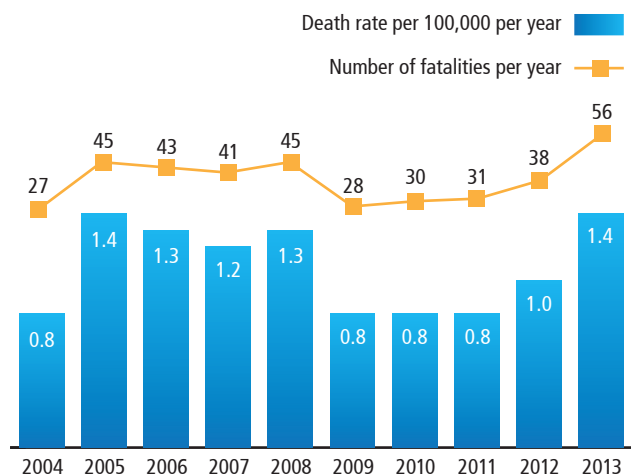
Alberta Water-Related Fatalities and Death Rates, Five Year Averages



Preliminary interim data

For drownings since 2013, only preliminary, interim data from media and internet reports are available. In Alberta, these numbers indicate that at least 28 drownings occurred in 2014 and at least 15 in 2015.

Alberta Water-Related Fatalities and Death Rates 2004-2013



After a substantial drop in drowning deaths to 28 in 2009, the number of water-related fatalities in Alberta has increased each subsequent year, culminating in a spike to 56 drowning deaths in 2013, the most recent year for which data is available. This surge in the number of drowning victims can be partially attributed to the 2013 floods. In mid-June of that year Alberta experienced heavy rainfall that triggered catastrophic flooding and claimed the lives of 5 people. In addition to the flood, the high number of drowning deaths

WHO is drowning?



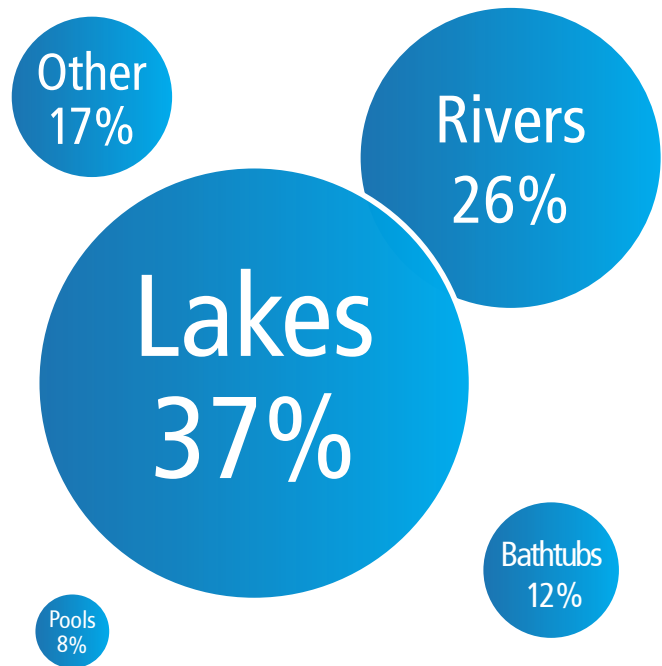
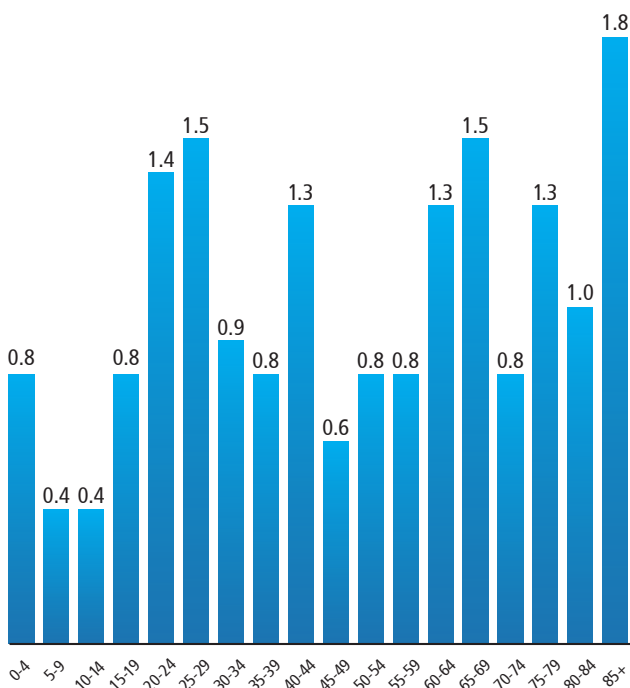
The vast majority of Alberta drowning victims continue to be men (8 out of 10). Between 2009 and 2013, the average water-related fatality rate for men was 1.5 per 100,000 population compared to 0.4 for women. In 2013, there was a slight increase in the number and proportion of female drowning victims – 27% were female, the greatest proportion in the five-year period.

By age, the highest drowning rates in Alberta were found among seniors 85 and older (1.8 per 100,000) and 65-69-year-olds (1.5 per 100,000), as well as young adults 25-29 years of age (1.5 per 100,000), and 20-24 years of age (1.4 per 100,000).

In keeping with reports from previous years, the death rate for children under the age of 5 in Alberta was lower than the national average for this age group (0.8 per 100,000 in Alberta and 1.1 per 100,000 in Canada as a whole).

Water-Related Death Rate By Age, 2009-2013

— Average death rate per 100,000 per year



WHERE are they drowning?

Natural bodies of water continue to account for the largest proportion of drownings in Alberta in 2009-2013 (63%). Lakes claimed the greatest number of lives (37%) followed by rivers and streams (26%). In 2013, 31 people drowned in a natural body of water.

Once again bathtubs (12%) were the most common man-made setting where drowning deaths occurred in Alberta. There were 22 bathtub drownings during the five-year period (2009-2013), 8 of which occurred in 2013. Pools were another common man-made location where drowning fatalities occurred (8%). Half of all pool fatalities occurred in private pools and half occurred in public pools.

Drowning deaths in lifeguard or instructor supervised settings were rare: in 2009-2013 fewer than 5% of drownings in Alberta occurred under lifeguard or instructor supervision.

In 2009-2013, drowning deaths were slightly less likely to occur in an urban setting (49%) than a rural setting (51%). This proportion is different from most other provinces where the majority of drownings occur in urban environments. By region, the greatest number of drownings in 2013 occurred in the Calgary area (29%) followed by Edmonton (16%).

WHEN are they drowning?

By time of year, the warmer months still account for the greatest percentage of drowning deaths in Alberta. Over half (59%) of water-related fatalities in the 2009-2013 period occurred in May through September. The highest number of drowning deaths during the five year period occurred in July (18%). In 2013, June (the month of the flood), saw the greatest number of water-related fatalities (12), followed closely by July (11).

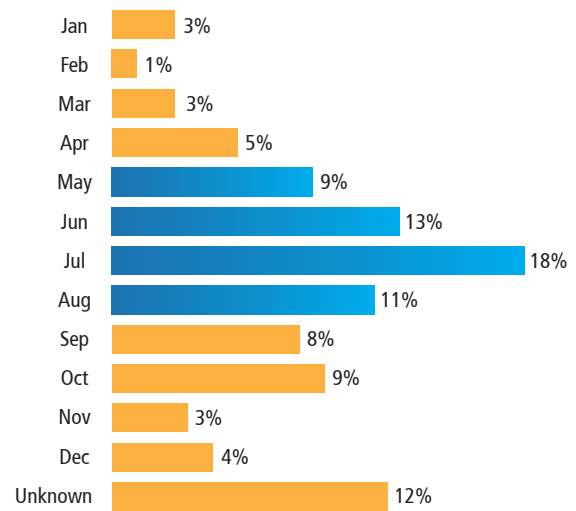
Consistent with the pattern observed in previous years, over half (54%) of the 2009-2013 drownings happened on the weekend (Friday, Saturday or Sunday).

WHAT were they doing?

By purpose of activity, recreational activities continue to account for the majority of drownings in Alberta. Over half (54%) of individuals who drowned between 2009 and 2013 were engaged in a recreational activity at the time. Among these, the most common primary recreational activity was swimming (27%) followed by non-powered boating such as canoeing or kayaking (18%). In 2013, 12 people drowned while engaged in one of these two activities; 8 while swimming and 4 while operating a non-powered boat.

Daily living incidents continue to account for a high proportion of drownings in Alberta (29%). More than one third (38%) of these were

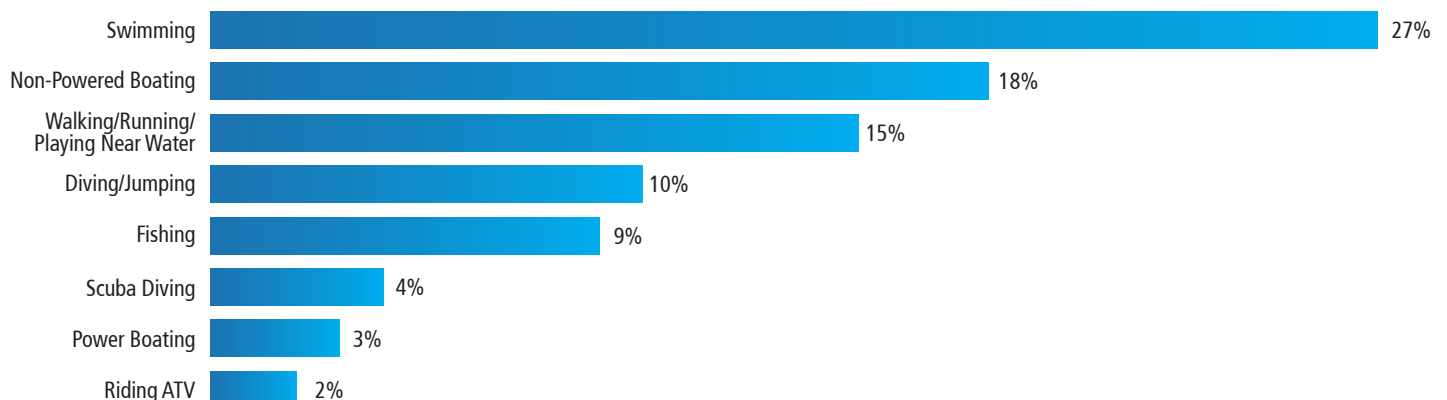
Water-Related Fatalities by Time of Year



bathing fatalities, and almost a quarter (23%) occurred as the result of a motor vehicle collision where the vehicle ended up in the water. In 2013, 7 people drowned while bathing and 5 people drowned during a vehicle collision. This was the greatest number of drowning deaths to occur as the result of each of these two activities in the last five years.

By type of activity, the largest proportion of water-related fatalities in 2009-2013 occurred during an aquatic activity where the victim intended to be in the water but something went wrong (28%). This was followed by non-aquatic incidents (20%), where the victim accidentally fell into the water, and boating incidents (20%). The majority of boating fatalities occurred as a result of canoeing (38%) or powerboat use (27%). Among these, the most common primary recreational activity was swimming (27%) followed by non-powered boating such as canoeing or kayaking (18%). In 2013, 12 people drowned while engaged in one of these two activities; 8 while swimming and 4 while operating a non-powered boat.

Water-Related Fatalities by Most Common Recreational Activity



Risk factors

The major risk factors contributing to drowning incidents in Alberta continue to be consistent with those the Lifesaving Society has identified for the national population in the past.

Boating

Not wearing a PFD (81%)
Capsizing (51%)
Alcohol consumption (22%)
Boating alone (20%)

Swimming

Alcohol consumption (37%)
Poor swimming ability (30%)
Swimming alone (26%)

Age

<5

Alone or with minors only (80%)
No supervision present (80%)
Supervision present but
distracted (20%)

5-14

Alone (44%)
With other minors only (22%)

15-34

Not wearing a PFD when relevant
(89%)
Alcohol consumption (46%)
Alone (31%)

35-64

Not wearing a PFD
when relevant (57%)
Alone (48%)
Alcohol consumption (38%)

65+

Alone (72%)

In summary

Water-related fatality rates in Alberta were highest among men, seniors (65-69 and 85+) and young adults (20-29).

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

The highest proportion of incidents occurred during a recreational activity, most commonly swimming or recreating near the water.

Despite the decreased water-related fatality rate in the 2009-2013 period, the fact that the number of drowning deaths in Alberta has increased each year for the past four years reinforces the need for continued strong drowning prevention efforts.

Research methodology

Complete data from 2004-2013

The drowning research process involves data collection, research tabulation, and analysis. Water-related death data is extracted from the Office of the Chief Medical Examiner of Alberta. 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 Alberta 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 Medical Examiner. 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 Medical Examiner of Alberta 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 the medical examiner's 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.

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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.

