

# NATIONAL DROWNING REPORT

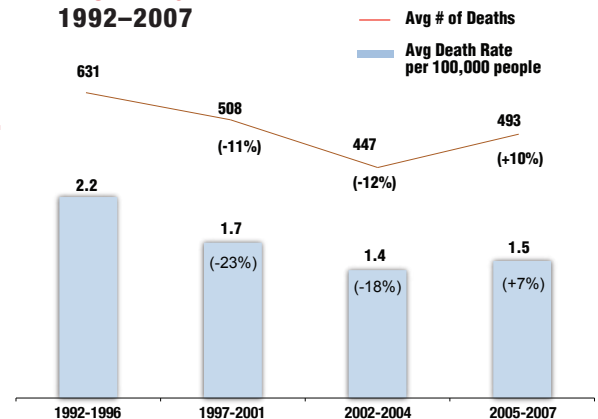
2011 Edition

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

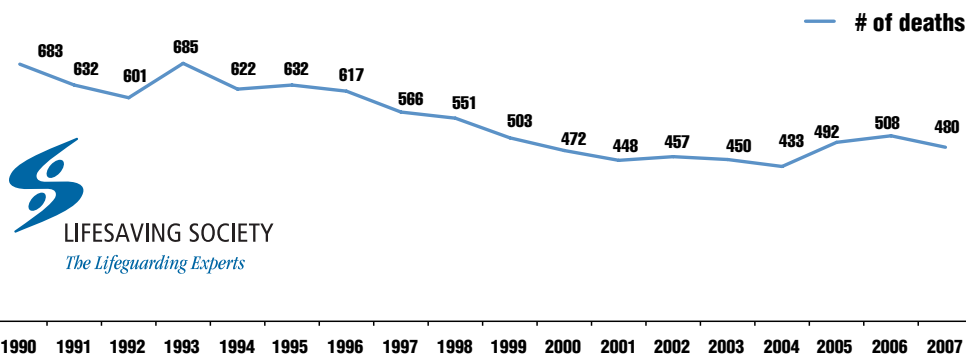
## DROWNINGS IN CANADA HAVE SHOWN RESURGENCE IN RECENT YEARS.

Until 2004, there was a long-term trend toward fewer drownings. After reaching an all-time low of 433 water-related deaths in 2004, there was an upswing to 492, 508 and 480 deaths in 2005, 2006 and 2007 respectively. On average, an increase of +10% versus the 2004-2006 previous-3-year average; and in each of 2005, 2006 and 2007, the number of water-related deaths is higher than during each of the previous 5 years. We have to go back to 1998 to see a higher number of annual drownings.

## DROWNING: TREND 1992-2007



## DROWNING: CANADA 1990-2007



 LIFESAVING SOCIETY  
The Lifeguarding Experts



## DROWNING RESURGENCE (CONTINUED)

Taking population into account, the national water-related death rate was also up slightly during 2005-2007 versus the previous-3-years, to 1.5 drownings per 100,000 Canadian population. However, longer-term, the drowning death rate was still down significantly from the 2.2 deaths per 100,000 population recorded 10 to 15 years earlier (1992-1996). So, **there has been significant long-term progress in reducing death by drowning in Canada; but the more recent upswing is of concern and reinforces the need for continued strong drowning prevention efforts.** The recent resurgence in Canadian water-related deaths reflects:

1. Regional upswings, in Ontario (+25% in 2005-2007 vs. 2002-2004), Alberta (+34%), Newfoundland & Labrador (+21%) and the northern territories (+45%).
2. More drownings among young adults (+32% among 18-34-year-olds in 2005-2007 vs. 2002-2004) and higher death rate (back up close to late 1990's level among 18-34-year-olds).
3. Aging population. Increased number of drownings among "Baby Boomers" 50-64 years of age (+14%), in line with population growth in that age group.
4. More drownings occurring across many activities, including: in-water aquatic activities (+18% in 2005-2007 vs. 2002-2004) such as swimming and wading; bathing/in bathtub (+41%); near-water non-aquatic activities (+14%) such as walking near water and falling in. These increases were partially offset by fewer boating fatalities (-13%).
5. Warmer, drier than average weather in much of Canada conducive to aquatic recreation. 2005 and 2006 were two of the warmest of the past 60 years in Canada according to Environment Canada; and the summer months were warmer than normal for 2005, 2006 and 2007.

Complete final data on fatal drownings and other water-related deaths for 2008 to 2010 is not yet available (from the provincial/territorial Chief Coroners and Medical Examiners). However, interim

### CANADA-WIDE FATALITIES

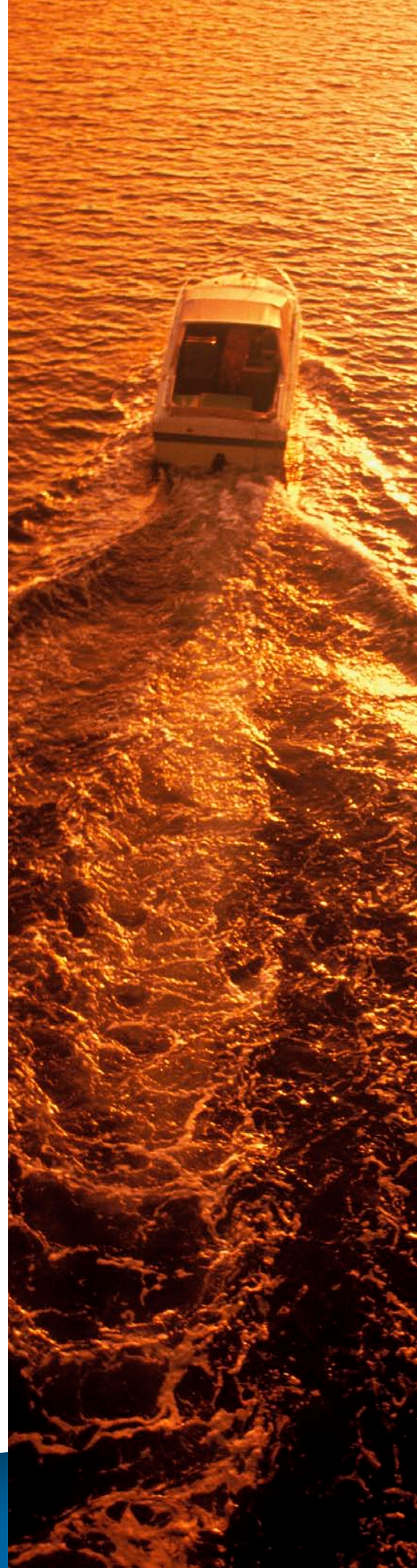
Preliminary interim data from media and internet reports

	2009	2010
Alberta	22	22
British Columbia	62	67
Manitoba	15	17
New Brunswick	12	12
Newfoundland & Labrador	38	24
Northwest Territories	2	2
Nova Scotia	13	19
Nunavut	3	1
Ontario	121	128
PEI	1	5
Quebec	68	80
Saskatchewan	9	24
Yukon	2	3
<b>TOTAL</b>	<b>368</b>	<b>404</b>

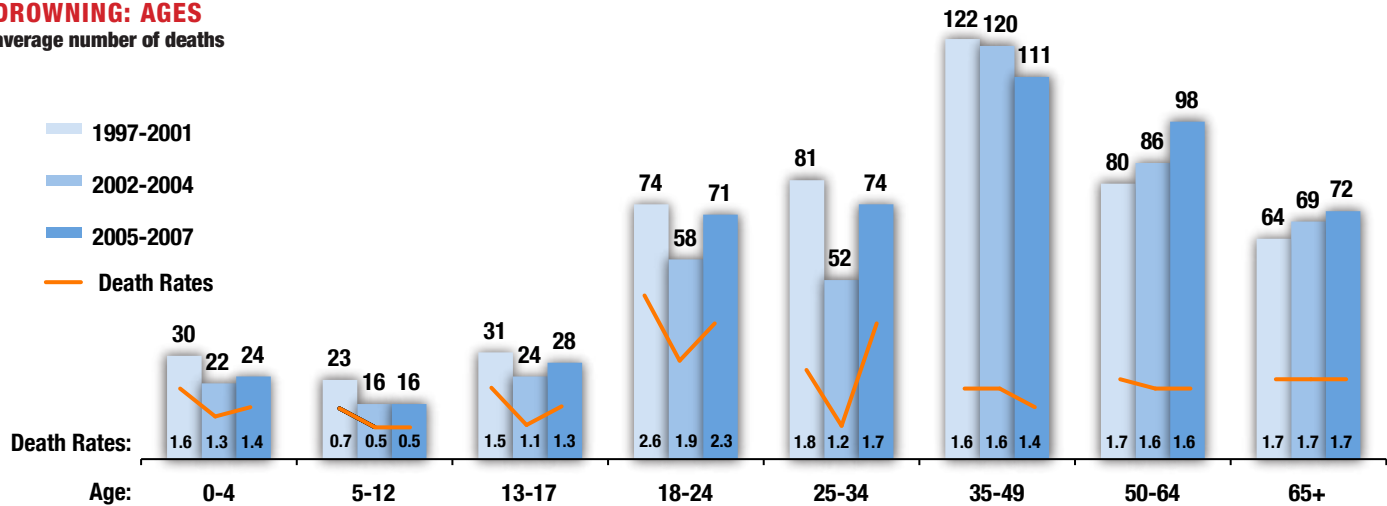
data collected by the Drowning Prevention Research Centre Canada (based on media and internet reports of drowning incidents) indicates another upward surge in 2010, with reported drownings up +10% in 2010, compared to the interim 2009 reported deaths.

This would reflect, at least in part, the warm weather of 2010. Temperatures were above average during the summer and for the year as a whole – 2010 was the warmest year in Canada since Environment Canada began tracking nationwide in 1948.

In the 2010 preliminary drowning reports, we again see increases especially among young men 18-24 years of age and older men 50-64 years. By province, the largest increases look to be coming from Quebec and Saskatchewan with smaller increases in a number of other regions.



**DROWNING: AGES**  
average number of deaths



**WHO**  
**IS DROWNING?**

**There were significantly more deaths among young adults 18-34 years of age during 2005-2007.** After a 2002-2004 dip, the number of drownings among 18-24-year-olds and 25-34-year-olds bounced back up almost to 1997-2001 levels. The Canadian population is only increasing marginally in these age groups so these increases reflect higher death rates – especially among risk-taking **18-24-year-olds who have the highest death rate of any age group in Canada** (2.3 water-related deaths per 100,000 population).

**Drownings are also on the increase among older Canadians.** With the 50+ population increasing in Canada (+9% in 2005-2007 vs. 2002-2004), especially for those 50-64 years of age (+12%), we see more water-related deaths among aging “Baby Boomers” (+14% for 50-64-year-olds).

On the other hand, it is encouraging to see the number of deaths and death rate dropping *long-term* among children. For both children under 5 years and children 5-12 years, the number of drownings and the drowning death rates were fairly stable in 2005-2007 compared to 2002-2004 and below earlier years. This is an improvement from the early 1990’s when children under 5 years in particular had a drowning death rate as high as young male adult risk-takers.

Looking at the Drowning Prevention Research Centre’s preliminary drowning data, we also see significant increases in the numbers of reported drownings among 18-24-year-olds and 50-64-year-old Canadians for 2010 compared to 2009. There are also 2010 increases reported among children and teenagers, who likely were even more active than usual in water-related recreation, given the warm 2010 weather.

**The vast majority of drowning victims continue to be men.** Year after year, 8 out of 10 drowning victims are male. The skew to male victims is evident across all age groups, but most pronounced among 18-34-year-olds where 9 of every 10 victims are male. This reflects higher risk behaviour around water among men than women. Overall, men accounted for 82% of Canadian water-related deaths during 2005-2007.

**WHEN**  
**ARE THEY DROWNING?**

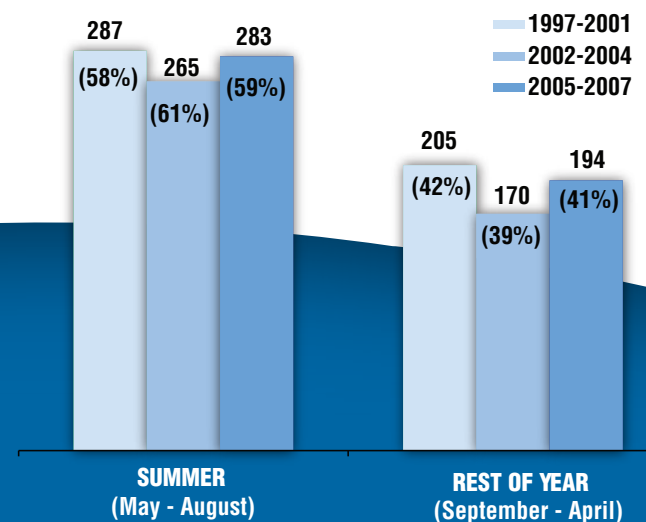
Drownings in Canada skew to the warmer months. **May, June, July and August accounted for 6 in 10 drownings during 2005-2007** with the peak in July and August (34%).

July/August drownings were up in 2005-2007 (+10% vs. previous 3-year average) but **the biggest seasonal increase actually occurred during the November–April period (+24%), when cold water is a major risk factor in unplanned sudden immersion.** In 2010, the preliminary data indicates more drowning in the May/June and September/October spring and fall months when cold water temperatures are also a major factor in most of Canada.

**Half (49%) of fatal incidents occurred on the weekend** (Friday, Saturday, Sunday) when participation in aquatic recreation is highest.

**Half (50%) of fatalities occurred in the evening or at night** despite most participation in aquatic activities taking place during the day. Being in, on or around water after dark is a significant risk factor especially for incidents involving adults.

**DROWNING: SEASONS**  
average number of deaths



# WHERE

## ARE THEY DROWNING?

Lakes (35%) and rivers/streams (24%) account for 6 in 10 of Canadian drownings. However, **the bathtub was the setting of the largest increase in water-related deaths** (+41% in 2005-2007 vs. 2002-2004). Half of bathtub victims were older Canadians 50+ years of age and almost all were alone (92%).

Private backyard swimming pool deaths are fewer in number, but did increase (+19% in 2005-2007 vs. 2002-2004). **The backyard pool is the site where children under 5 years most often drown.**

### Drownings increased

#### most in Ontario

(+25% in 2005-2007 vs. 2002-2004),

**Alberta** (+34%),

**Newfoundland and Labrador** (+21%)

**and the northern territories** (+45%).

There was an offsetting decrease in the number of drowning in B.C. (-12%), and also decreases since the late 1990's in Quebec, Nova Scotia, Manitoba and Saskatchewan.

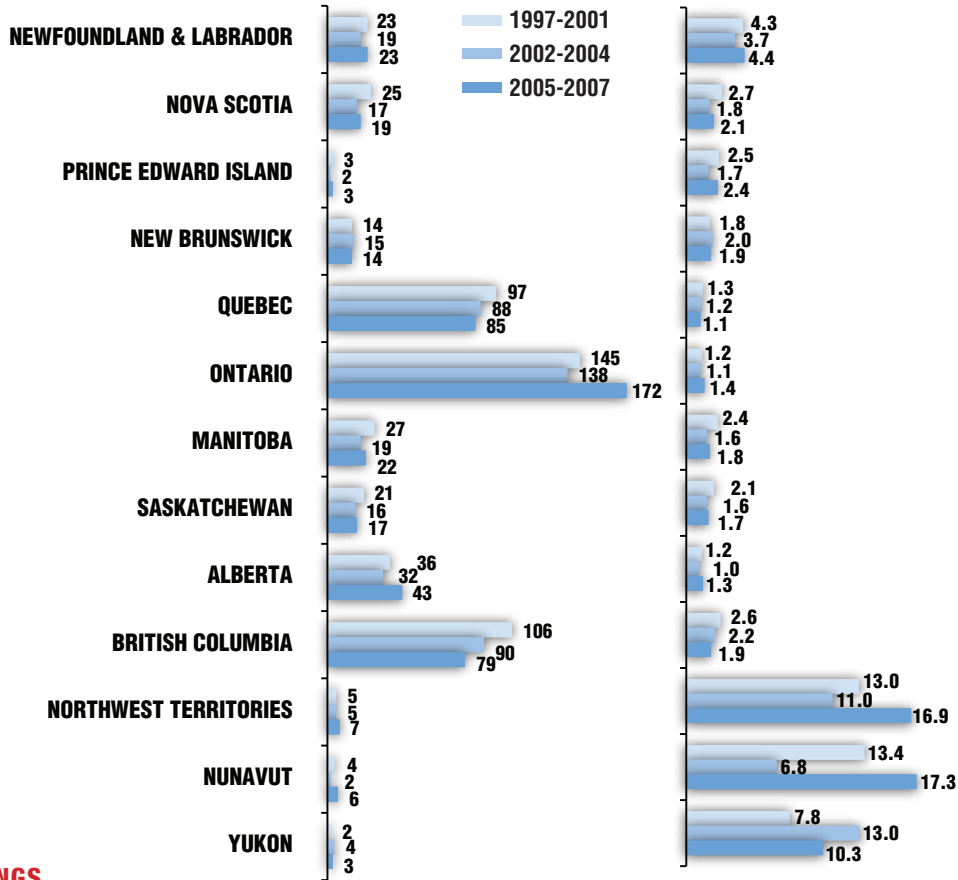
In 2010, the preliminary data suggests we may be looking at more drowning in several regions, especially Quebec and Saskatchewan, and fewer drownings than in 2009 in Newfoundland and Labrador.

### DROWNING: PROVINCES / TERRITORIES

average number of deaths

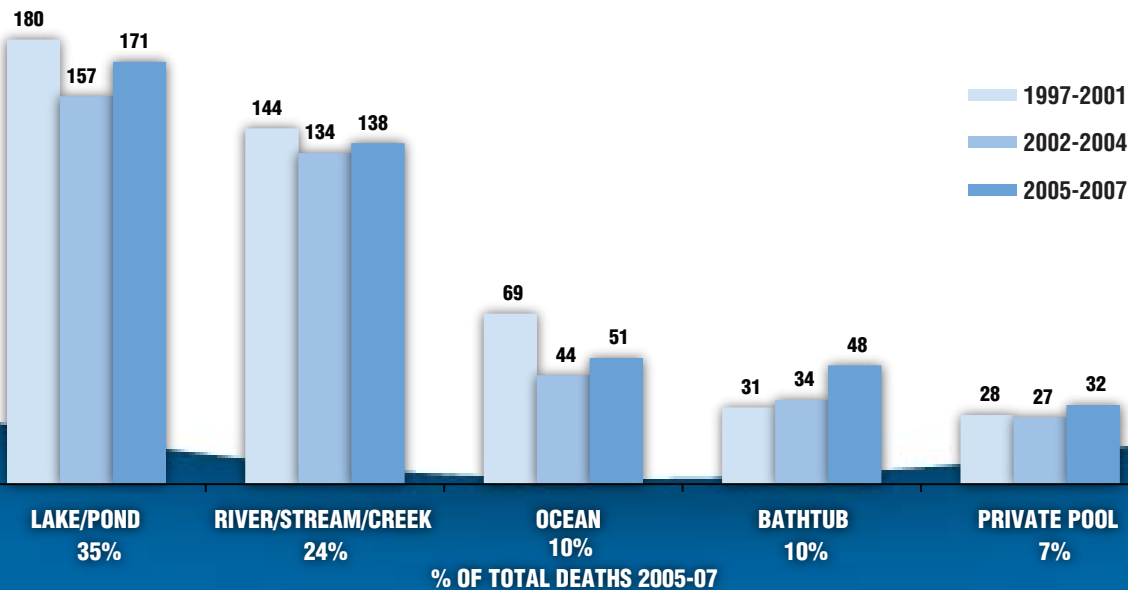
### DEATH RATES

deaths / 100,000



### DROWNING: SETTINGS

number of deaths



# WHAT

## WERE THEY DOING?

Recreational activities continue to account for the majority of Canadian drownings (59%) and were up by +5% in 2005-2007 vs. 2002-2004.

Daily living deaths account for one-quarter (26%) of water-related deaths, but were up by +21% during 2005-2007. About one-third (38%) of daily living fatalities occurred while bathing (increased +48%) – especially young children and elderly victims; and about one-third (33%) involved automobile travel (increased + 18%) – e.g., where the vehicle went off the road or bridge, or went through ice, especially among 18-49-year-olds.

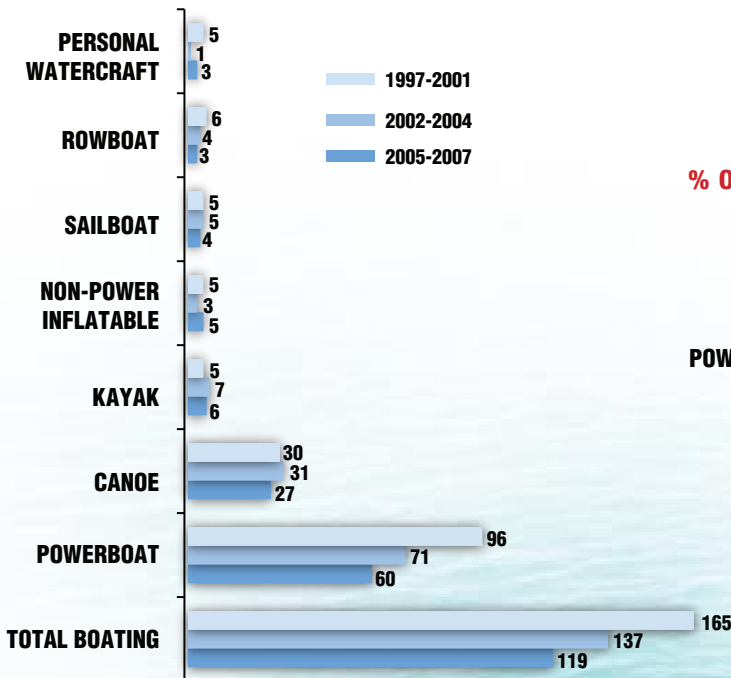
**Swimming is still the activity during which the largest number of drownings occur followed by powerboating and fishing.**

Deaths while swimming increased during 2005-2007 (+12%), while powerboating and sport fishing deaths decreased. Walking near water, “partying”, playing in water/wading and snowmobiling were other recreational activities for which there were increased numbers of drownings in 2005-2007.

*Boating deaths 2005-2007 were down -13% vs. 2002-2004 and by about one-third (-38%) from the late 1990's. By type of craft, this reflects a major decrease in powerboat deaths.* Fatalities involving other types of craft have remained much more stable over time.

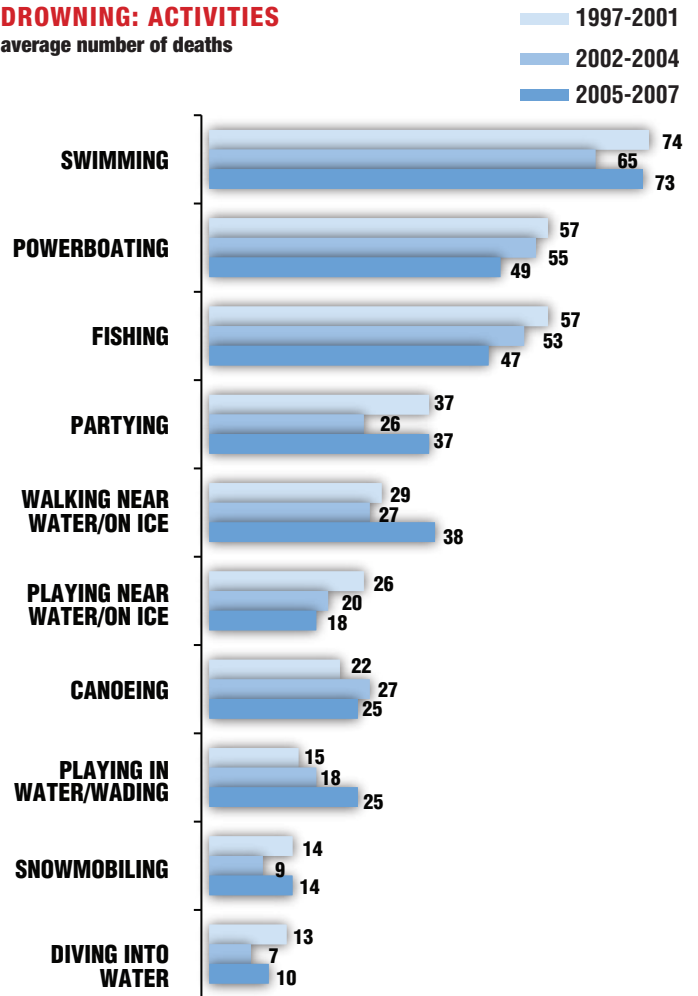
## BOATING DEATHS: VESSEL TYPE

average number of deaths

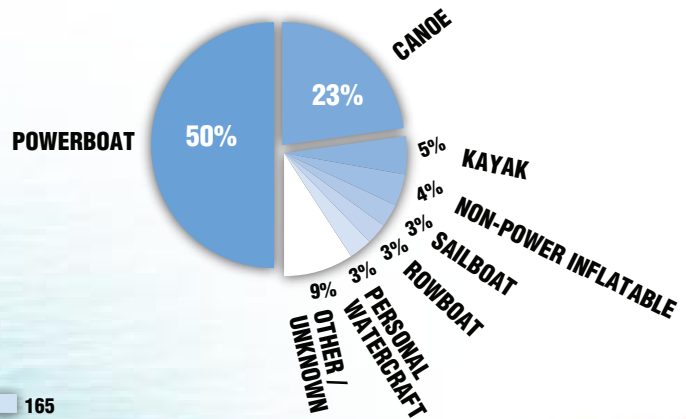


## DROWNING: ACTIVITIES

average number of deaths



## % OF BOATING DEATHS 2005-07



# WHY

## DID THEY DROWN?...RISK FACTORS

**Boating:** The major risk factors cited in fatal boating incidents were: not wearing a PFD/ lifejacket (80% of 2005-2007 boating deaths); cold water (44%); capsizing (40%) and falling overboard (25%), often in rough water (22%); alcoholic beverage consumption (39%); and boating alone (30%) versus 70% of boating victims with companion(s) who were unable to rescue them.

**Swimming:** Victim unable to swim (35% of victims for whom swimming ability information was available); alcohol consumption (30%); swimming alone (24%) versus 76% of swimming victims with companion(s) who could not rescue them; and heart disease / suffering a heart attack while swimming (21%).

**Young children under 5 years of age:** Alone near water (65%)... often only for a momentary absence/lapse of caregiver attention (57%).

**Young men 18-34 years of age:** Alcoholic beverage consumption (47%); cold water (46%); after dark (37%), not wearing a PFD (80% of relevant situations); alone (35%) or 65% with companion(s) who could not rescue them.

**Older adults 50+ years of age:** Not wearing a PFD in relevant situations (80%); cold water (48%); heart disease/suffering a heart attack (33%); alcoholic beverage consumption (29%); alone (64%) or with a companion(s) who could not rescue them (64%).

## RESEARCH METHODOLOGY

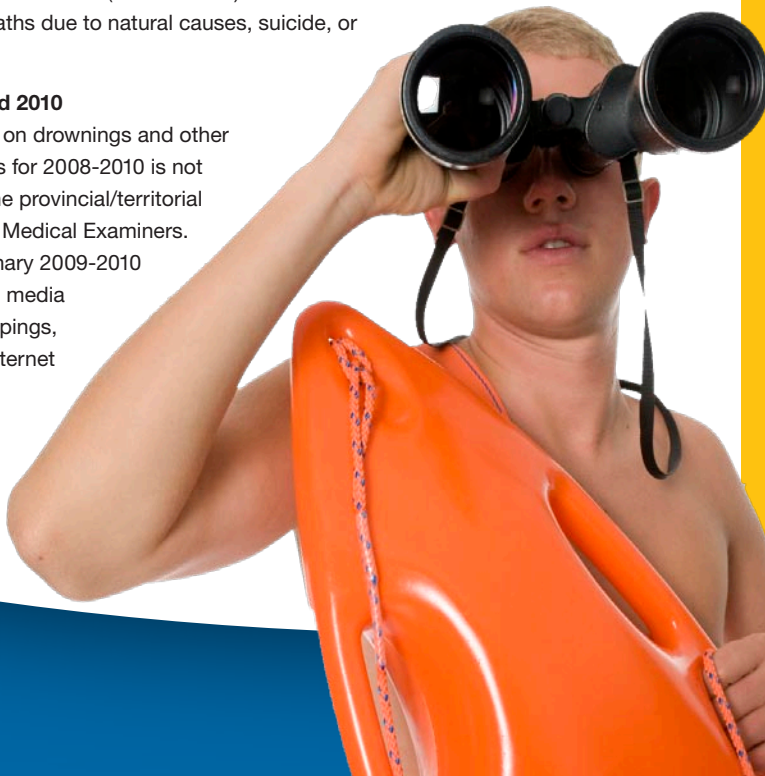
### Data from 2002-2007

The drowning research process involves data collection; research tabulation and analysis; and development of the reports. A data collection form and process is used to extract the water-related death data from the offices of the Chief Coroners and Medical Examiners in each province. The scope of this research:

1. collects the data needed to profile victims of aquatic incidents, including the circumstances and contributing factors under which these incidents occurred.
2. includes all deaths in each province and Canada overall 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.
3. includes only preventable (unintentional) deaths. It does not include deaths due to natural causes, suicide, or homicide.

### Data from 2009 and 2010

Complete final data on drownings and other water-related deaths for 2008-2010 is not yet available from the provincial/territorial Chief Coroners and Medical Examiners. The interim, preliminary 2009-2010 data is derived from media releases, media clippings, news reports and internet searches.



## 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 800,000 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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## 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, Email: [experts@drowningresearch.ca](mailto:experts@drowningresearch.ca), Telephone: 416-490-8844.

## ACKNOWLEDGEMENTS

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1. The Chief Coroner's Office and the Chief Medical Examiners in each province, who permitted and facilitated confidential access to coroners' reports on preventable water-related deaths. This provided the base data for this research and report.
2. The volunteers who contributed their time and energy including data extraction on preventable water-related deaths from coroners' files.