

# Presentation to CRD Regional Parks Committee

November 22, 2023

Presented by: Neil Arason, BC Centre for Disease Control, and  
Lead, Injury Prevention and Safety Promotion, Island Health

With: Joanne Lum, Senior Environmental Health Officer, Island Health

*Excellent health and care for everyone, everywhere, every time.*

# Injury is:

## The #1 cause of death for British Columbians aged 1 to 44

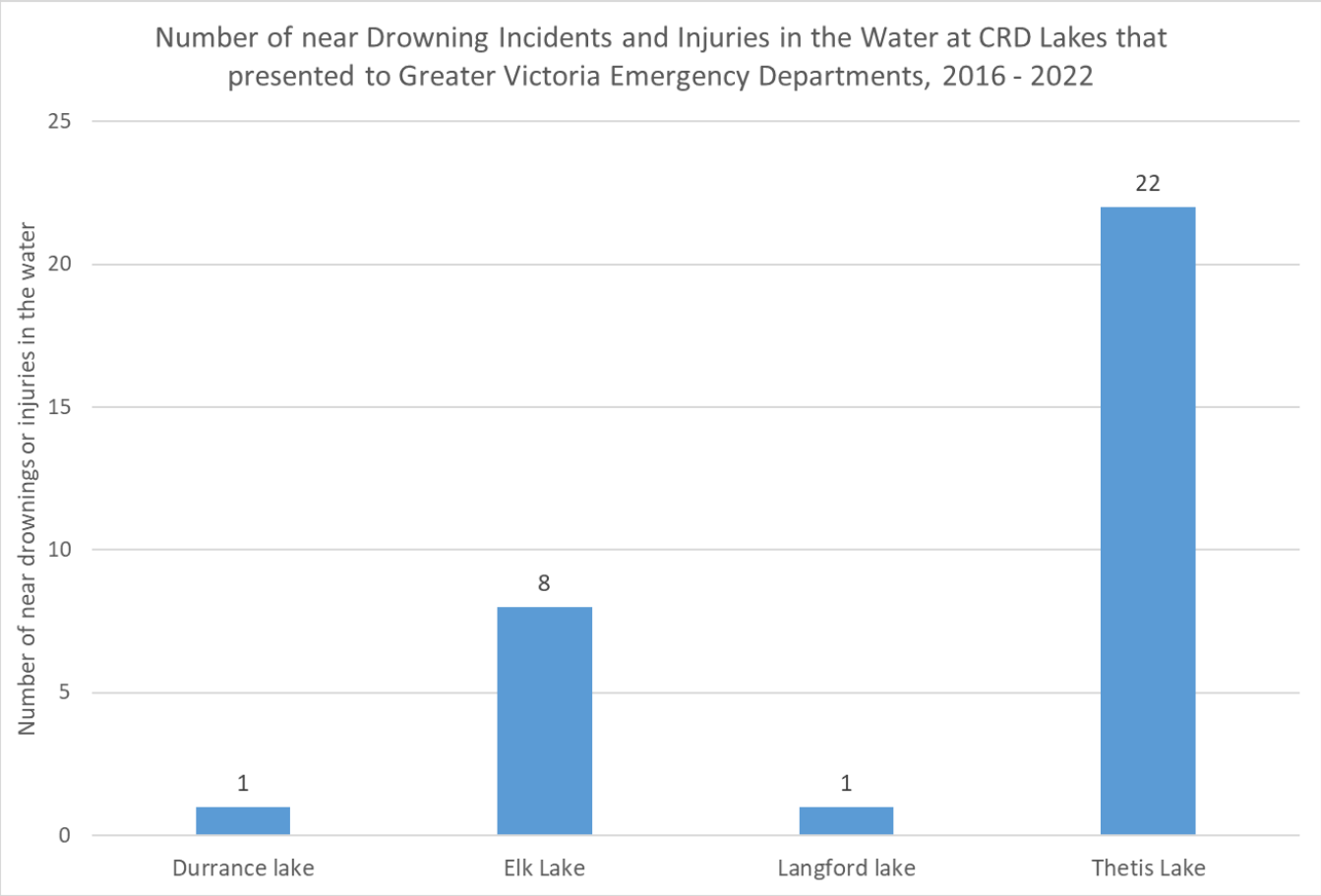
# The numbers are only part of the picture...

- Many small numbers add up to larger ones.
- Focusing only on 'large number' problems can carry missed opportunities including not addressing injury inequity.
- Injury prevention work should be guided by not only the data that describes the problem but also by the existence and availability of proven solutions.

# *Injuries Associated with CRD Lakes*

- An analysis of Island health emergency department (ED) at three South Vancouver Island Hospitals (Victoria General Hospital, Royal Jubilee Hospital and Saanich Peninsula Hospital) found that 32 ED visits due to injury in water or near drownings at CRD lakes were reported between January 2016 and March 2023.
- 11 CRD lakes were identified as being a CRD lake and a key word search of all ED records for any mention of those lakes were selected and analysed for mention of drowning or injury occurring in or around the water. The CRD lakes are as follows:
  - Thetis Lake,
  - Elk/Beaver Lakes,
  - Durrance Lake,
  - Florence Lake,
  - Langford Lake,
  - Sooke Lake,
  - Wrigglesworth Lake,
  - Matheson Lake,
  - Humpback Reservoir,
  - Magic Lake, and
  - Prior Lake.

**Figure 1: Visits to Greater Victoria Emergency departments due to near drowning incidents or injuries in the water at CRD Lakes, 2016 – 2022.**



# Drowning fatalities in CRD lakes

There were 4 reports of deaths in CRD lakes:

- 3 were in Thetis Lake (2008, 2013, 2018). 1 additional fatal drowning on Sept 29, 2023, making new total of 4.
- 1 was in Florence Lake (2012)

# Injury – Changing Views

## OUTDATED VIEW

Injuries are simply unfortunate accidents that just happen and there is little we can do



## MODERN VIEW

Injuries are system failures that can be managed and reduced in systematic ways

A major injury prevention principle involves:

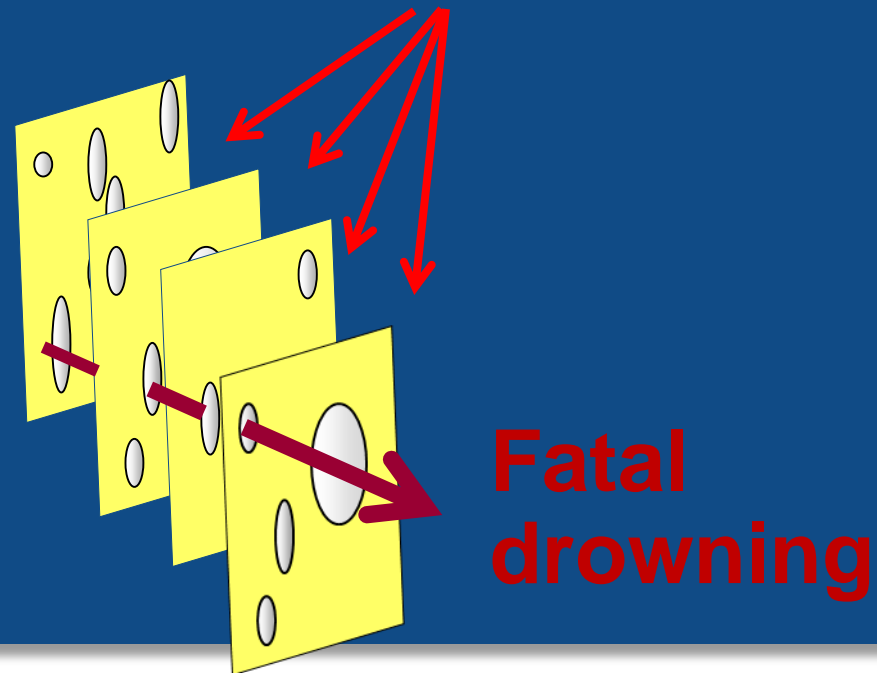
Building redundancy



# Current Situation

- Too few levels of protection, too much focus on the individual

Safety highly dependent on individual human behaviours including the idea that people must simply take responsibility for their own safety

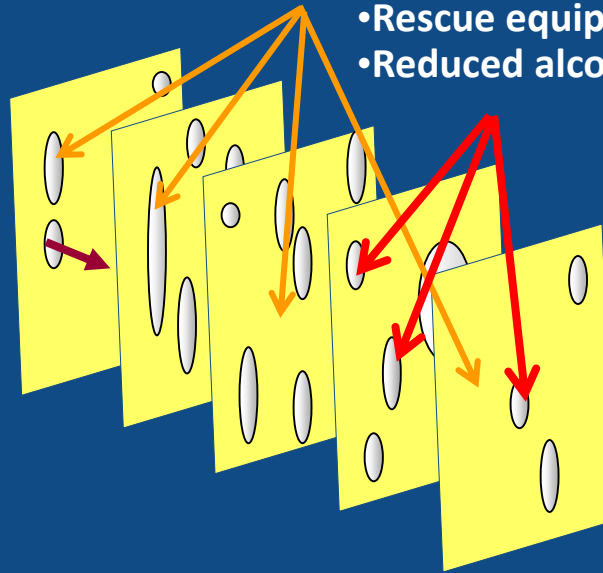


Concept adapted from James Reason and Fred Wegman

# The Safe System Approach

- Water safety literacy programming incl. not swimming alone
- Swim lesson programs
- Programs to support use of personal floatation devices
- Signage and information
- Bylaw enforcement
- Lifeguard programs
- Rescue equipment (even when lifeguards not on duty)
- Reduced alcohol consumption

**SERIOUS WATER  
RELATED INCIDENT  
CANNOT GET  
THROUGH**



# Evidence for lifeguard effectiveness

- 1 in 18 million chance of drowning at a lifeguard supervised beach (*Branche, CM., Stewart, S. eds. Lifeguard Effectiveness: A Report of the Working Group. Atlanta: Centres for Disease Control and Prevention, 2001*)
- Lifeguard and tracking/planning reporting regulations associated with 33% and 45% reduction in open water drowning rates overall and among those aged 0-17 years (*Quan, L., Mills, B. Chau SS. et al. Inj. Prev., BMJ., 2020*)

# Testimonial (Thetis Lake)

Tony Toriglia worked at Thetis Lake for seven seasons when the City of Victoria employed lifeguards and taught National Lifeguard Courses. Based on his experience at Thetis Lake, he taught lifeguards that they could expect the following at Thetis Lake each year:

- 30 to 40 water contact rescues,
- 5 to 10 of them required paramedic support and removal to hospital,
- 200 first aid treatments for various minor injuries (e.g., wasp bites, heat exposure, minor cuts), and
- 5 to 10 medical emergencies requiring paramedic support.

In the past, the Lifesaving Society BC & Yukon Branch has recognized heroic rescues at Thetis Lake during their Honour and Rescue Awards. Thetis Lake has long had a reputation for high-risk activities within the British Columbia aquatic industry.

*The above information courtesy of Tony Toriglia and Len Manuel of the Lifesaving Society of BC & Yukon Branch.*

# The Lifesaving Society BC & Yukon Branch:

- “The Lifesaving Society BC & Yukon Branch strongly supports the reinstatement of lifeguards for Thetis Lake and Elk/Beaver Lakes. Lifeguards not only save lives through rescues, but they also prevent incidents from occurring, providing water safety knowledge that is applicable for times when there is no lifeguard on duty.”

# Benefits of lifeguards are multi-layered

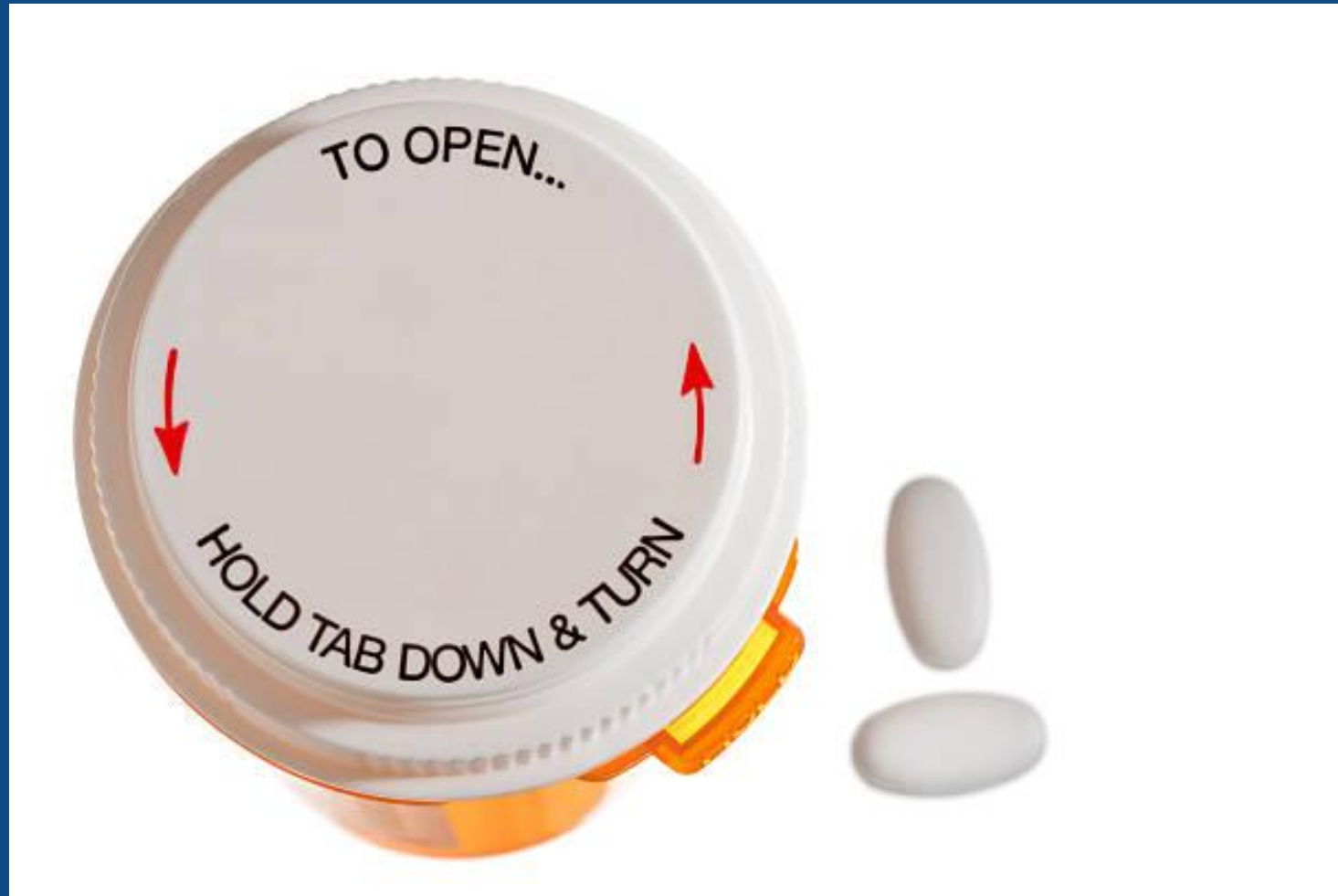
- Provide a range of services and actions including:
  - Development of a water front safety plan (including audit functions),
  - Prevention, advice, guidance, enforcement of rules,
  - Identification of hazards,
  - Assistance in early, low risk stage,
  - Rescue, responding to a person at high risk,
  - Public address/announcements,
  - Use of signs and flags to inform of specific time or space bound risks,
  - Face-to-face interactions, advice provided, and
  - Various tracking and reporting functions (log book).



## And still other benefits include:

- Provision of lifesaving equipment (even when lifeguards not on duty, e.g., PALs, PDF loaners, etc.)
- Trained in CPR and First Aid (can also respond to other medical emergencies such as a heart attack)
- Provide Naloxone
- Provide employment opportunities
- Create community connections

# What works?





# Potential Next Steps

Upon request the Lifesaving Society BC & Yukon Branch Aquatic Safety Management Services can be contracted to conduct Comprehensive Audits to access the waterfront to make recommendations concerning:

- The waterfront conditions for safe water activities,
- Identify potential danger areas,
- Strategic locations for emergency signage,
- Lifeguard positioning for swimmer super,
- Emergency equipment needed to manage emergency,
- Lifesaving equipment for use when lifeguards are not on duty,
- Public information and education signage, and
- Review the Waterfront Safety Plan.

Island Health can support next steps as required.

# Thank you for your time

## Questions/comments?