# Human-Wildlife Conflict Prevention and Response

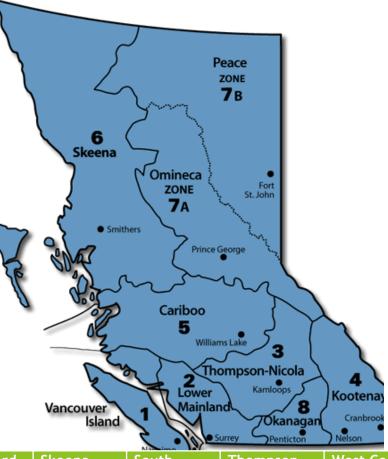


# **UBCM 2024**

#### BC Conservation Officer Service Human Wildlife Conflict

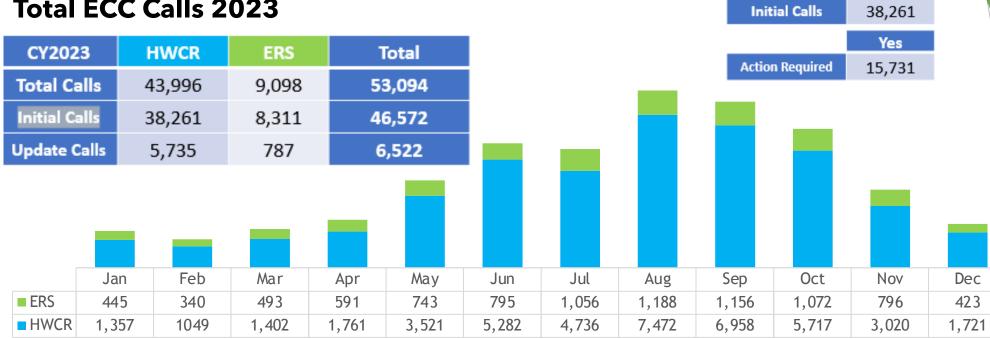
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# COS ORG STRUCTURE



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#### **Total ECC Calls 2023**





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Black Bear Calls	23,649			
Deer Calls	7326			
Grizzly Bear Calls	809			
Cougar	1572			





Jan 01, 2023 - Dec 31, 2023	Amount
Black Bear Calls	23649
Black Bear Orphans	1081
Black Bear Livestock	281
Black Bear Human Injury	25
Black Bear Human Injury in Urban Area	19

## COS Response to Reports of Conflict Black Bears

Interim Guidelines on Orphaned Bear Cubs

Today, the American black bear is the most abundant bear species on the planet. Populations are currently at their highest levels in the past 100 years with the North American population estimated at about 700,000-800,000 (Table 1:Beausoleil and Dobey 2015, Masterson 2016)

# Challenges





Expanding communities - urbanization Societies food availability/security initiatives

Outdated bylaws, contradicting current attractant management strategies

Effectively enforcing attractant management legislation

Bear Threat Level Category 1 Category 2 Category 3		Human-Black Bear (Single) Conflict Response Guidelines											
		Bear Actions (HWCR Type)> Public Safety Risk									k		
		Conflict Si History	Sighting	Confined or Treed	School/Park/ Playground Present	Natural Prey/ Crops	Food Conditioned (includes garbage does not include crops)	Follow/ Stalk/ bluff charge a Human	Damage to Property	Livestock/ Pet -Killed/ Injured	Enters Dwelling temporary or permanent	Injured/ Distressed Present	Human Injuryf Death
HWCR Location	Wilderness	Low											
		Moderate											
	Rural	Low											
		Moderate											
	Urban	Low											
		Moderate											

Response Guidelines

Taught to all newly hired Conservation Officers

#### COS Response to Single Black Bear Conflict Threat Level

Category 1 - CO must take action due to serious public safety risk or loss of property.

Category 2 - CO to manage people and the site.

Category 3 - CO to monitor and may provide education and advice.





Policy on Preventing Conflict with Large Carnivores - 2019 Provincial consistency with use of Response Guidelines

Collaboration with communities - Bear Smart

Partnerships with communities - WildSafe / WSRO

Partnerships with First Nations - Guardian/Ranger Training

# Solutions



PHOTO: CITY OF PORT COQUITLAM

# Working Together

# **Moving Forward**



## RIDE THE THE WAVE UBCM 2024



British Columbia Conservation Foundation



WildSafeBC Pacific Rim

Bob Hansen & Caitlin Beaudin

**Keeping Wildlife Wild and Communties Safe** 

www.wildsafebc.com

# What we'll Cover



- An overview of our journey to Bear Smart Status
- What is WildSafeBC??
- How have we and others have worked to support the pursuit of Bear Smart Status for Tofino

# Bear Smart Status -

# Achieved June – 2024

#### THE BEAR SMART VISION

- Focus efforts on addressing the root causes of bearhuman conflicts.
- Reduce the overall number of conflicts.
- Reduce the number of bears that have to be destroyed due to conflicts.



#### THE BEAR SMART COMMUNITY PROGRAM IS BASED ON A SERIES OF ESTABLISHED CRITERIA:

#### 1. Prepare a bear hazard assessment.

Review the history and pattern of bear conflicts in the community and identify highuse bear habitat, human-use areas (school yards, playgrounds, etc.) and non-natural attractants such as accessible garbage, fruit trees, bird feeders, compost, etc.

#### 2. Prepare a bear/human conflict management plan.

Develop strategies to resolve the hazards identified and reduce the potential for human-bear conflicts.

#### 3. Revise planning and decision making documents.

Ensure the community's commitment to the Bear Smart Community Program by incorporating Bear Smart practices into official community documents such as the Official Community Plan and/or Solid Waste Management Plans.

#### 4. Implement a continuing education program.

Education is a key component of human-bear conflict reduction and the community must have an ongoing education program that is directed at all sectors of the community and consistent with the WildSafeBC/Ministry standard.

#### 5. Develop and maintain a bear proof waste management system.

Ensure that all components of municipal waste management including waste, recycling and composting are managed appropriately and made inaccessible to bears. This may be done through bylaws, the use of bear-resistant containers and/or electric fencing.

#### 6. Implement Bear Smart by-laws.

Implement "Bear Smart" bylaws prohibiting the provision of food to bears as a result of intent, neglect, or irresponsible management of attractants. Implement a compliance strategy for these bylaws to ensure that there is full compliance with them.

#### BEAR SMART SUCCESSES

We have seen a steady decrease in the number of bears killed annually in response to conflict with people.



Completed Hazard Assessment and Conflict Management Plan 2019



2021 Recommendations for OCP implemented



Caitlin Beaudin, 1<sup>st</sup> full-time, yearround Community Coordinator



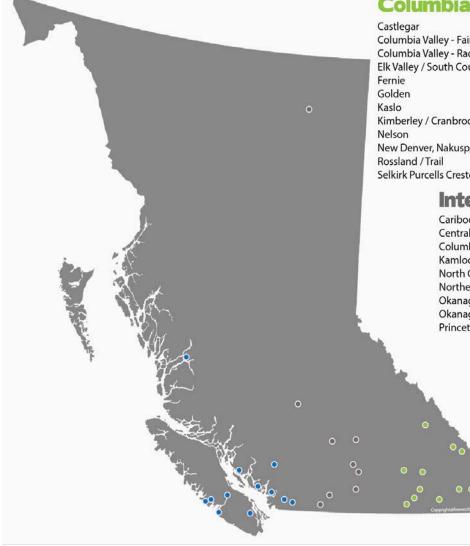
Self-Latching commercial bins and ACRD bear-resistant residential poly carts



**Bylaw Enacted Spring 2024** 

#### www.wildsafebc.com

#### WildSafeBC Community Programs 2021



#### **Columbia Basin**

Columbia Valley - Fairmont Columbia Valley - Radium / Invermere Elk Valley / South Country Kimberley / Cranbrook New Denver, Nakusp, Silverton Selkirk Purcells Creston

#### Interior

Cariboo Central Okanagan Columbia Shuswap Kamloops North Cascades Northern Rockies Okanagan Similkameen RD (partner) Okanagan Westside Princeton

#### Coast

Alberni Valley Bamfield Cowichan Valley District of North Vancouver Fraser Valley Hitacu-Macoah Maple Ridge (partner) Pacific Rim gathet-Powell River Squamish-Lillooet RD Sunshine Coast

# WildSafeBC

### Program managed by the BC Conservation

#### Foundation

- WildSafeBC is the **provincial leader in** 
  - **preventing conflict** with wildlife through

collaboration, education, and community solutions.

- **30+ Community Coordinators** serving
  - 100+ communities





British Columbia Conservation Foundation

2013 to present



# WildSafeBC - How we work

- Focus on the root-cause of human-wildlife conflict supporting activities that are sustainable & lead to long-term reduction in conflict.
- Education organization (also support other activities such as electric fencing).
- WildSafeBC Business Pledge, Bare Campsite Pledge, Ranger presentation, connecting with community groups to find ways to better coexist with wildlife.



# Bear Smart Criteria #4 – Continuing Education

- The Business Pledge
- Bare Campsite Program
- Door-to door outreach
- WildSafe Ranger Presentations
- Wildlife Awareness and Safety presentations
- Bear spray workshops
- Outreach and Education booths
- Garbage bin-tagging





UL SAFE

Together, we

# keep our wildlife

# wild and

# community safe

RAPP Report All Poachers and Polluters

24 Hr Hotline: 1-877-952-RAPP

Cellular Dial: #7277 (on Telus Network)

rapp.bc.ca

www.wildsafebc.com

## People and Bears Sharing a Landscape

PRNPR Black Bear Study

How Many Bears are There?

DISTRIBUTION OF BLACK BEAR SAMPLING HEXAGONS AND MONITORING STATIONS IN AND AROUND THE LONG BEACH UNIT OF PACIFIC RIM NATIONAL PARK RESERVE dropped

8 km

PRNPR BOUNDARY

Fig. 1. Bear monitoring stations in and around Long Beach Unit, PRNPR



British Columbia Conservation Foundation



Sources of Human-Black Bear Conflicts

**Keeping Wildlife Wild and Communties Safe** 

www.wildsafebc.com



# Tempting bears into conflict



#### **Keeping Wildlife Wild and Communties Safe**

#### www.wildsafebc.com

## 2021/2022 Report Cards

80+ incidents involving property damage – Costs - Many Ks – Staff Time – Community Stress

Since 2021 - increased aggressive incidents – 6x bear spray

**4** 10 home invasions

**50 bear deaths - 3 years - due to human causes** (bears attracted to food sources in our communities)

- **38 human-bear conflicts**
- **12** collisions with vehicles



## Managing attractants

- Districts, residents and businesses are investing in longterm solutions
- such as
- bear-resistant bins
- ACRD polycart rollout



## Unsecured / Broken Carabiner Versus Secured / Repaired Carabiners

PARKING

# Effective Versatile

# Staff Housing – Long Term Solution







Home / Wildlife Attractant Bylaw

#### Wildlife Attractant Bylaw

#### fi y 🖻 🗖

Several communities in British Columbia have already enacted bylaws that are specific to preventing bears, cougars and wolves from accessing and becoming conditioned to or dependent on food sources generated or controlled by human activity.

#### **Keeping Wildlife Wild and Communties Safe**

#### www.wildsafebc.com

# Bear Smart Vision - Engagement – Conflict Prevention, Education & Response – Continuing Support



Collaborations, Reach and Capacity Continues to Grow – Year to Year to Year





## RIDE THE THE WAVE UBCM 2024

# Human-Bear Conflict Management in Whistler

UBCM September 17, 2024

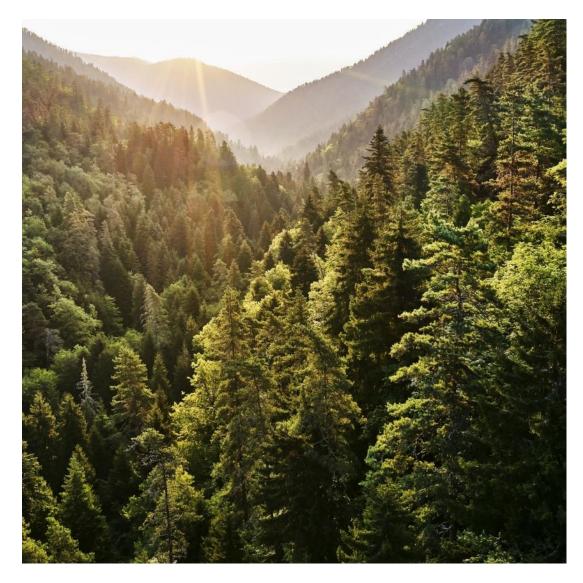






WHISTLER

## Where will you see bears in Whistler?



Honestly. Anywhere.

Along highways and roadways Valley trail Centre of the village Residential areas Forest areas Lakes

If a bear can get there, you could see them!



# What kind of bears will you see?

#### **Black Bears:**

- Est. 120k-150k Black Bears in BC, Whistler approx. 50-60 bears
- Prefer forested areas, adaptable to changing habitats
- Sense of smell 2100x better than humans
- Home range 5km-40km

#### Grizzly bears:

- BC est. 15,000, Whistler region 12-16
- Prefer flatter, open areas
- Slowest reproducing mammal in North America
- Home range 25km-200km
- Increasing Grizzly Bear activity

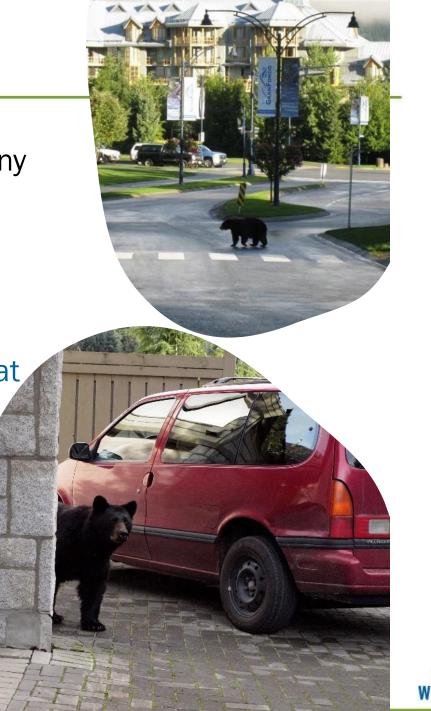




## Unique challenges in Whistler

Statistically Whistler has some of the highest numbers of human-bear conflicts annually of any municipality in British Columbia.

- Design of Whistler
- Visitor destination
  - Hiking and biking trails through bear habitat
  - High occupancy accommodation (staff accommodation)
  - Transitional population
- High number of pet owners in Whistler
- Habituation level to people





## Bear management has a long-standing history in Whistler





## Whistler is a Bear Smart Community since 2011

- Set requirements for communities
  - The Whistler Bear Response Plan
  - The Human-Grizzly Bear Conflict Mitigation Strategy
  - Attractant management and bylaws
- Addresses root causes of bear/human conflicts
- Reduce and prevent human-bear conflicts
- Reduce number of bears destroyed
- 3 in Sea to Sky corridor





## What is Whistler doing as a Bear Smart Community?











Whistler Bear Working Group Education, messaging, signage No curbside collection

Dogs on leash community

**RMOW BSPA** 



# Bear Smart Program Assistant

- Community out-reach and education
- Informs neighborhoods of bear activity
- Liaisons with COS
- Integral part WBWG
- Program lead on bear initiatives
- Updates bear response plans with WBWG and COS



## Some messaging examples



Resort Municipality of Whistler (RMOW) May 19 · 🕲

🄌 Grizzly Bear Alert 🏄

The Conservation Officer Service (COS) has attended and confirmed reports of a Grizzly Bear in the Function Junction and Cheakamus area of Whistler.

This is the same bear that was on the Western outskirts, but has now moved to the South end of the community.

Residents and visitors are asked not to travel to these areas to view the bear, to ensure the bear is not crowded and has the space it needs to feed and perform natural behaviours.

Action that can be taken to reduce the risk of conflict with bears is:

😸 Ensure all pets are leashed when out walking, at all times, unless in a designated off-leash area

Secure garbage and compost correctly, so wildlife is not attracted to homes

😸 Hike in groups of 4+

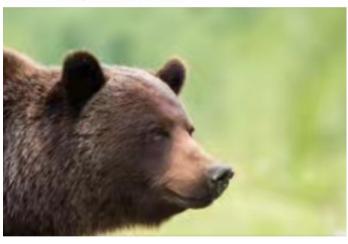
Use your voice when biking to shout ahead and reduce the risk of surprise encounters

Additionally, carrying bear spray when hiking and biking can help if a situation escalates beyond an encounter.

If you do encounter a bear, it is important to give the bear space. Speak in a calm, firm voice. Check around you to ensure there are no other bears, cubs or a food source the bear may be trying to access. Back away slowly from the area. If you do find yourself between a bear and cubs or a food source, move calmly and quietly to the free area to create space between yourself, the bear, cubs or food. Remaining calm and not making loud noise shows the bear that you are not a threat to them and want to leave the area.

Please report any conflicts with grizzly bears to the COS on: 1-877-952-7277.

For more information please visit: whistler.ca/bears





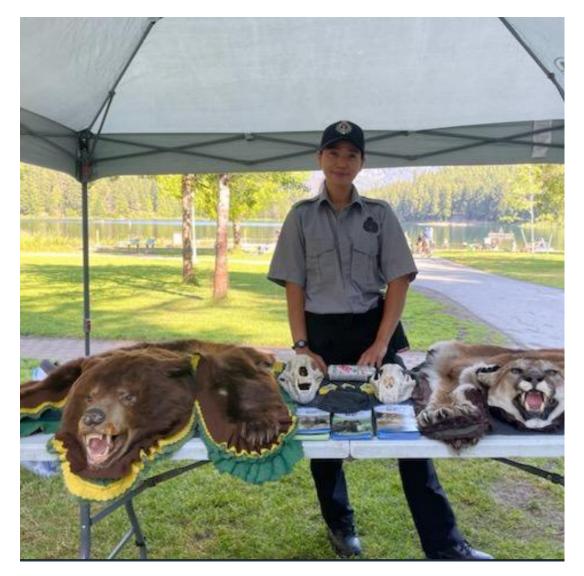
## Conservation Officer Service (COS) and RMOW



- Letter of Agreement between COS and RMOW
- Enhanced Human-Bear Conflict Reduction and Response Program
- Close collaborations between COS and BSPA
- Compliance and enforcement related to the Wildlife Act
- COS will share public safety info to RMOW to share with public, such as wildlife alerts



# COS Wildlife Safety Response Officer (WSRO)



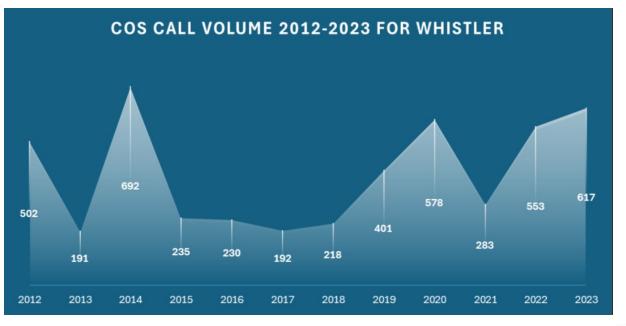
- Public education and outreach
- Integral part of WBWG
- Wildlife attractant enforcement
- Attend human wildlife conflict reports ("HWCR") in a first-responder role
- Work closely with the RMOW BSPA to ensure messaging is aligned
- Provide conflict reports and statistics



## Climate change and droughts

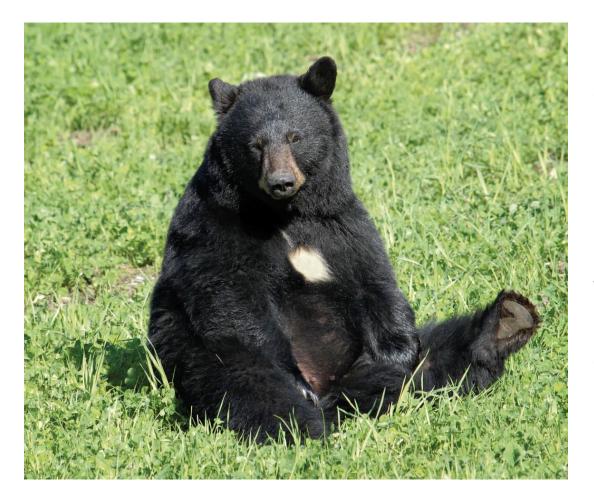


- Bear deaths
  - 6 in 2022
  - 11 in 2023 drought year
  - 3 so far in 2024 -





# Summary



RMOW engaged in proactive initiatives to reduce and prevent human-bear conflicts since 1995

Whistler is a Bear Smart Community since 2011

BSPA role and education programs are fundamental to avoid wildlife human conflict

Strong collaboration with COS

WSRO position a success in avoiding conflict



# Questions?





# RIDE THE THE WAVE UBCM 2024

# The science of wildlife conflict and coexistence.



https://infotel.ca/newsitem/in-video-sightings-of-comfortablecougar-in-kelowna-has-residents-on-edge/it86817



#### Adam T. Ford, Associate Professor Wildlife Restoration Ecology Lab

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adam.ford@ubc.ca atford.weebly.com

# The ecology of conflict

Conflict occurs when animals:

- 1) eat the wrong thing.
- 2) occur in the wrong space.
- 3) behave badly.



# The ecology of conflict.

## Conflict occurs when animals:

- 1) eat the wrong thing.
- 2) occur in the wrong space.
- 3) behave badly.

CANADA

#### Bear visits Okanagan backyard, takes brief pool dip before being shooed away



By Doyle Potenteau · Global News Posted August 15, 2020 6:27 pm



An Okanagan woman captured video of an unwanted visitor briefly enjoying a cool pool dip – Aug 15, 2020

# The ecology of conflict.

## Conflict occurs when animals:

- 1) eat the wrong thing.
- 2) occur in the wrong space.
- 3) behave badly.



Naramata, BC

# The ecology of conflict.

## Conflict occurs when animals:

- 1) eat the wrong thing.
- 2) occur in the wrong space.

Grackles are very territorial. They will sit on power lines and chatter at passersby, and will often

woon down like a warning

3) behave badly.



Naramata, BC

# Understanding the ecology of conflict

## **Conflict**

- 1) eat the wrong thing.
- 2) occur in the wrong space.
- 3) behave badly.

## **Conflict/coexistence ecology**

Food webs, nutritional ecology Movement ecology, tracking, habitat selection Behavioural ecology, conditioning

## Understanding the ecology of conflict: tools and technologies



**GPS tracking:** movements, survival, feeding



**Trail cameras:** activity, site monitoring

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Public reports: management outcomes

# Research questions in the ecology of conflict

- Where/when is conflict occurring?
- What are the consequences of conflict?
- How effective are management actions to reduce conflict?



#### Home · News

#### Wolf killed in Pacific Rim National Park Reserve between Tofino and Ucluelet

A wolf was killed after attacking a dog on Sunday.







#### VANCOUVER ISLAND

Wolf killed after showing up at Ucluelet elementary school

Keep your re gutters clea wildfire se FireSmart

Advertiseme

MOST-WATCHED

MOST-READ

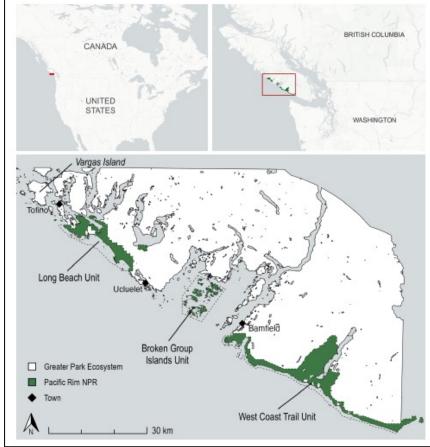
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Jeff Lawrence
CTV Vancouver Island
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Published Friday, June 16, 2017 4:49PM PDT

Last Updated Friday, June 16, 2017 4:59PM PDT

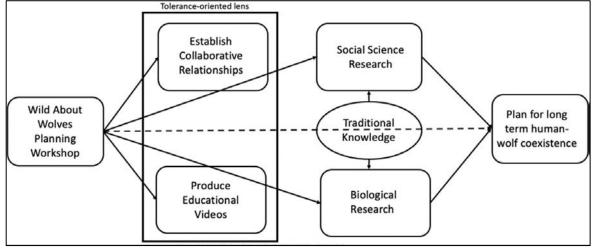


Darimont/The Canadian Press)



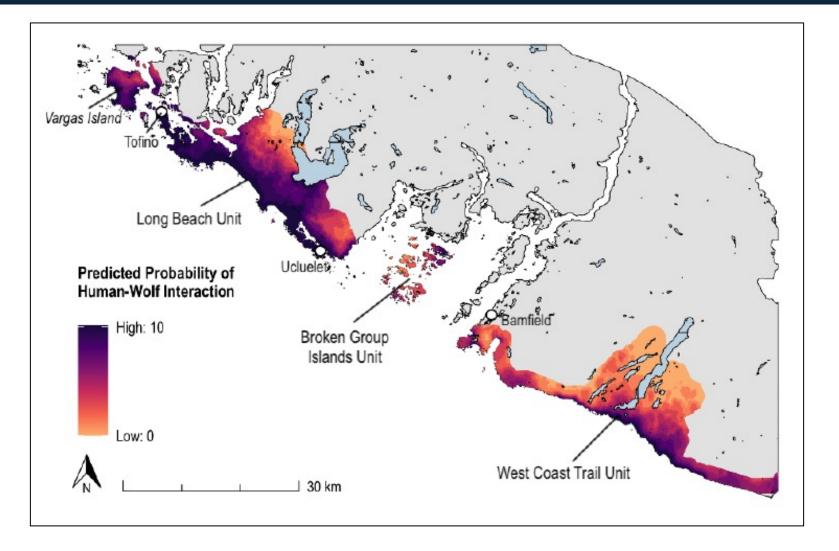






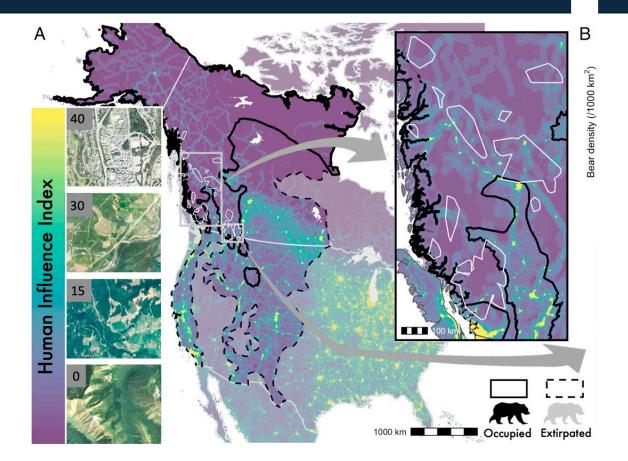








Jenna Scherger, In prep



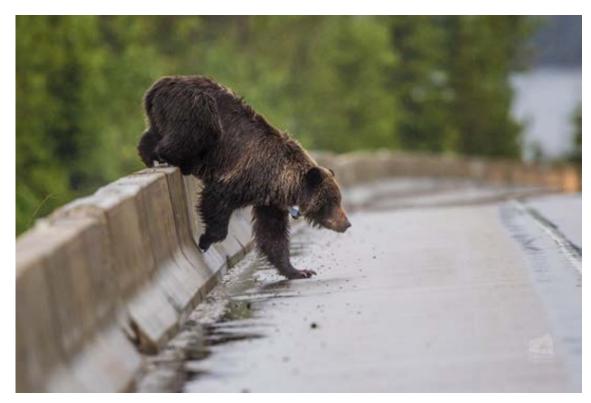


The ecology of human-carnivore coexistence

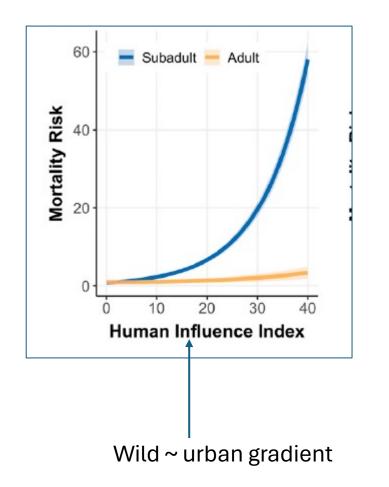
Clayton T, Lamb, Cadam T, Ford, Bruce N, McLeilan, Michael F, Proctor, C Garth Mowat Lana Clarniello, C Scott E, Nielsen, and Stan Boutin



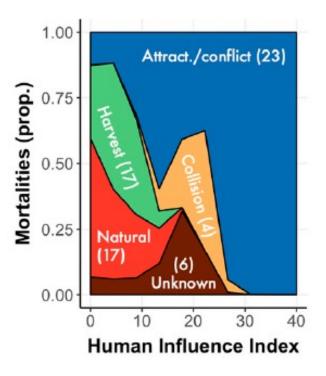
Dr. Clayton Lamb

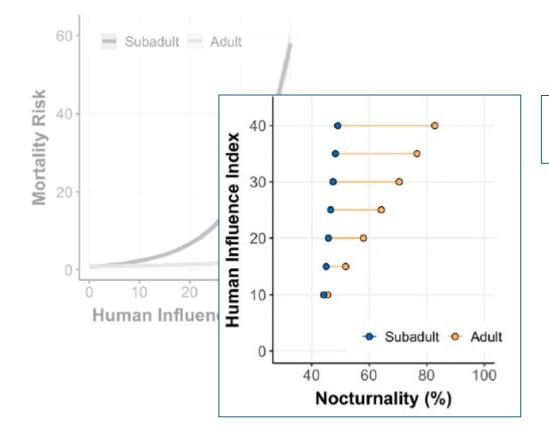


- 2500 grizzly bears
- 41y of data
- Monitored for 808 bear years
- 75 mortalities
- 474,222 relocations
- 12 research projects.

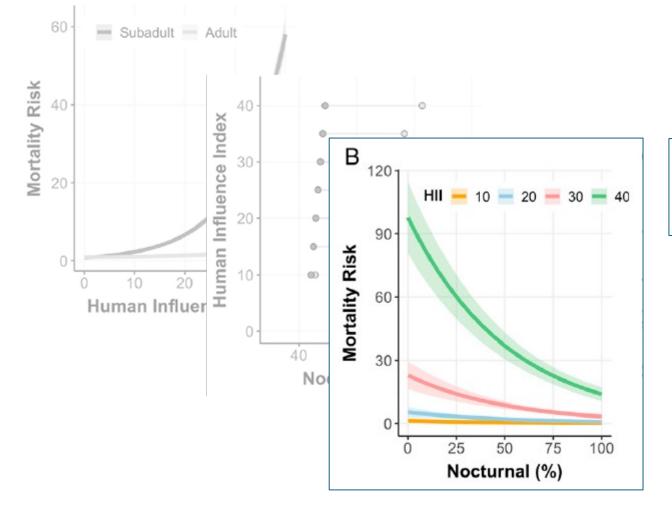


- Young bears likely to dies as human influence increases;
- Survival of older bears is more stable.
- Past a human influence index of ~10, most bears die because of people.

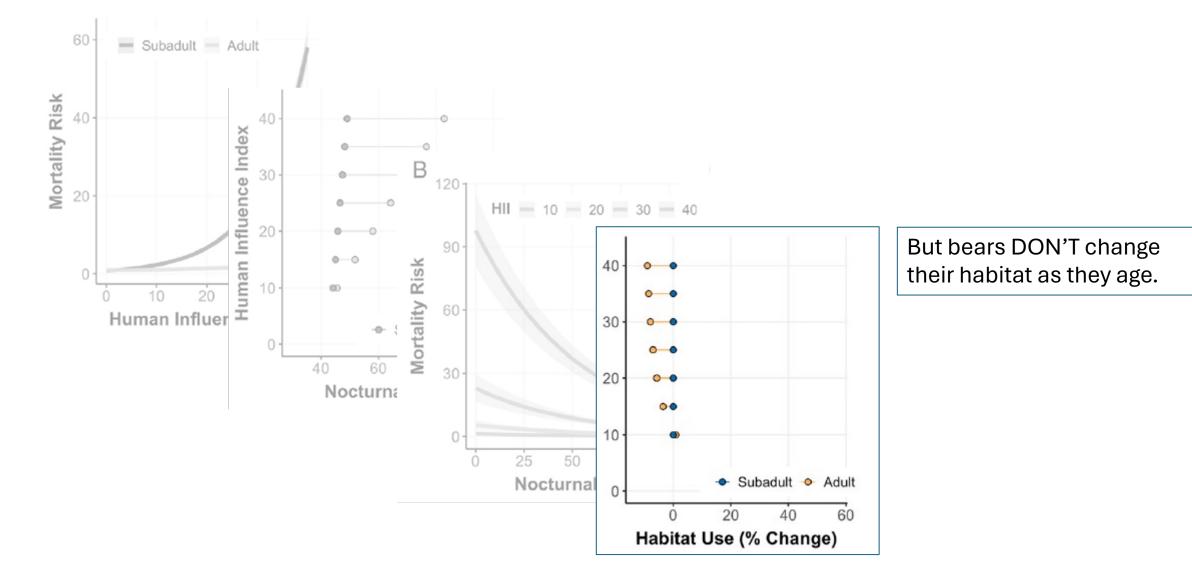


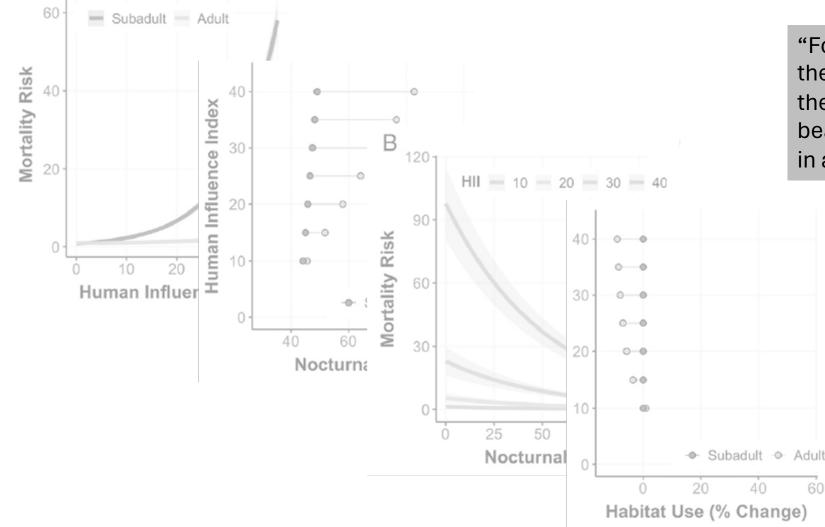


Older bears are more nocturnal than younger bears.



Nocturnal bears gave higher survival, especially in human areas (green line).





"For every bear that lives to 14 y, there will be about 29 other bears in the cohort that will die, while only 4 bears will die during the same time in a wilderness area."



60





#### Chloe Wright

The Journal of Wildlife Management 84(8):1457-1472; 2020; DOI: 10.1002/jwmg.21935



Research Article

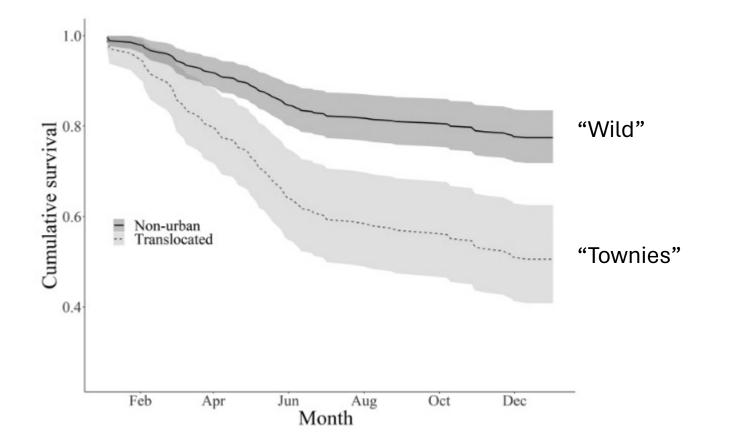
Comparing Survival and Movements of Non-Urban and Urban Translocated Mule Deer

CHLOE A. WRIGHT,<sup>1</sup> University of British Columbia, Department of Biology, The Irving K. Barber Faaulty of Science, Kelowna, BC VIV 1V7, Canada

IAN T. ADAMS,<sup>2</sup> Larix Ecological Consulting, 3396 Simms Rd, Cranbrook, BC V1C 6T1, Canada

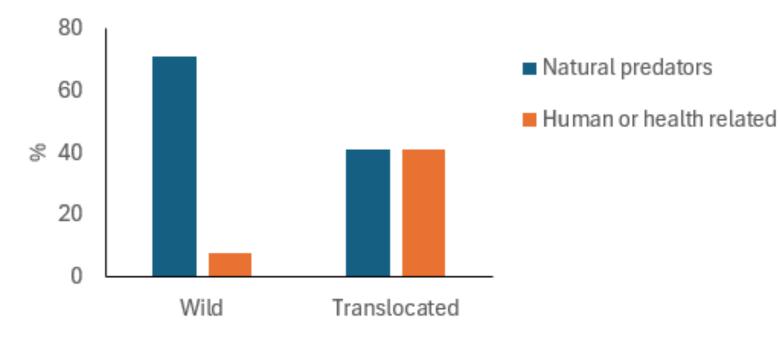
PATRICK STENT, British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development, 205 Industrial Road G, Cranbrook, BC VIC 765, Canada

ADAM T. FORD, University of British Columbia, Department of Biology, The Irving K. Barber Faculty of Science, Kelowma, BC VIV 1V7, Canada

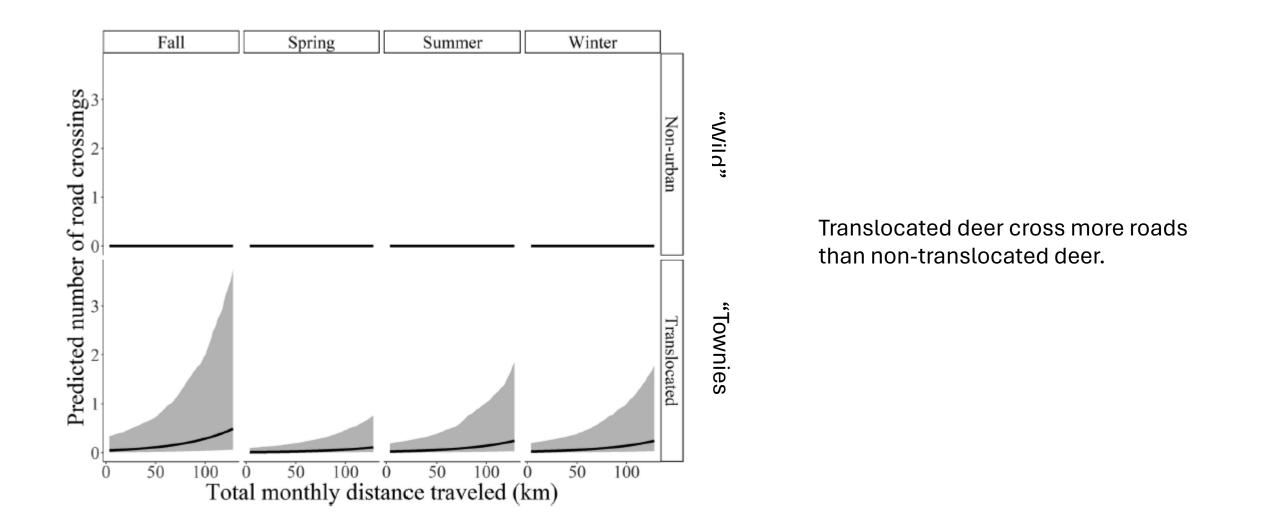


Survival of translocated deer was ~30% lower than wild deer.

#### Sources of mortality of wild and translocated deer



Wild deer usually died from predators and rarely by people; deaths from people were 33% higher for translocated deer



## Hypotheses, research needs, and funding



#### News / Local News

#### 'Complicated problem': As bears awaken across Metro Vancouver, conflict with humans remains key issue

In 2023 a record 603 black bears were killed by B.C. conservation officers, up from 493 the year before Sarah Grochowski

Published Apr 19, 2024 • Last updated Apr 20, 2024 • 4 minute read



Do wildfires result in more bear sightings in cities?



Prince George, la ville la plus mortelle pour les ours noirs en Colombie-Britannique



#### British Columbia

#### As hungry bears feast in B.C. towns, some people are taking a 'no snitching' stance

Officials say it is important to report all aggressive or 'conflict' bears



David P. Ball · CBC News · Posted: Sep 09, 2023 3:09 PM PDT | Last Updated: December 29, 2023

#### **British Columbia**

# Bears, bears, everywhere in Prince George, B.C., as animals come to the city seeking food

Researchers say more data is needed to understand bear populations in the city yearto-year

Andrew Kurjata · CBC News · Posted: Aug 05, 2023 8:00 AM PDT | Last Updated: August 5, 2023

#### **British Columbia**

#### Advocates call for conservation officers to wear body cameras

2023 saw decade-high number of black bears killed by the B.C. Conservation Officer Service



Michelle Morton · CBC News · Posted: Feb 19, 2024 3:19 PM PST | Last Updated: February 19

### Hypotheses, research needs, and funding

Municipality	Total	2023	2022	2021	2020	2019	2018	2017	2016
Prince George	339	76	32	36	45	24	31	31	39
Quesnel	126	22	2	19	20	11	19	14	10
Burns Lake	121	17	1	17	13	32	19	12	7
Kamloops	119	31	6	13	5	13	9	16	11
Terrace	112	12	2	11	64	4	2	22	6
Smithers	96	24	3	8	4	23	9	14	9
Nelson	85	2. <del></del> .)	21	11	4	4	6	7	18
Squamish	76	11	6	5	6	15	6	8	11
Powell River	75	121	2	4	7	14	4	8	4
Mackenzie	74	28	8	7	14	8	4	3	0
Coquitlam	73	2 <del></del> )	4	8	5	21	14	6	12
Kelowna	68	-	9	6	7	10	8	5	16
Vanderhoof	37	17	6	1	1	4	1	2	3
Fraser Lake	23	10	2	8	0	2	0	1	0
Fort St. James	19	11	2	1	0	3	2	0	0

Why were more bears killed in 2023 than other years and why so many in Prince George?

- 1) Are bears behaving different? Fires? Drought?
- 2) Are there more bears?
- 3) Are people calling in more sightings? Or acting differently?
- 4) Is the BCCOS doing something differently?

2021-22 Together for Wildlife projects on human-wildlife conflict

Mitigating Human-Bear Conflicts in the Omineca Region Malakwa Grizzly Bear Conflict Management Mitigating Human-Bear Conflicts in the West Coast Region Mitigating Human-Elk Conflicts on Vancouver Island Preventing and Responding to Human Wildlife Conflict and Orphan Cub Rearing and Release Review of Government Service Delivery Managing Human-Wildlife Conflict Throughout the Province

= 6 projects = \$212,400 from a \$10,300,000 budget (2%)

#### Hypotheses, research needs, and funding



Ecology and wildlife science







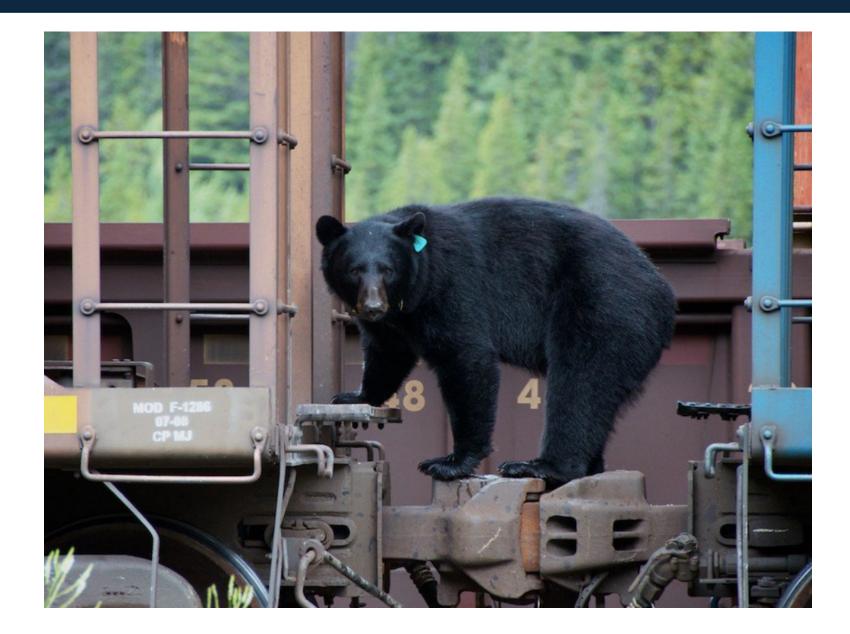
Social science and community engagement

Governance and policy

Management and enforcement

Understanding and preventing human-wildlife conflicts is a conservation issue, a community safety issue, and requires contributions from MANY sectors in society!

# Thank you!



# **Big Brothers Big Sisters of Canada**

In appreciation of our speakers today and with thanks for your contribution, UBCM has made a donation to the Big Brothers Big Sisters of Canada. Big Brothers Big Sisters of Canada has been championing the health and wellbeing of youth. They provide direct service to children by matching volunteers with youths in quality mentoring relationships to overcome adversities, helping them to do better in life.

