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s.14 ; s.16

## Briefing for MGH

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From: Hewitt, Jeremy ENV:EX <Jeremy.Hewitt@gov.bc.ca>  
To: Fradley, Adria N ENV:EX <Adria.Fradley@gov.bc.ca>, Tromp, Cheryl ENV:EX <Cheryl.Tromp@gov.bc.ca>, Moran, Jennifer ENV:EX <Jennifer.L.Moran@gov.bc.ca>, Horne, Matt ENV:EX <Matt.Horne@gov.bc.ca>  
Sent: May 17, 2022 3:25:30 PM PDT  
Adria, thanks for your note about timelines for net zero plans.

s.12

s.22

Regardless of where we land on timing I'll volunteer to take a first cut at deck which I'll pass back to you for comment.

Cheryl can you work with DMO re scheduling please. Let's try for an hour.

We'll also need an eapp created.

Thanks,

Jeremy



Ministry of  
Environment and  
Climate Change Strategy

# British Columbia's Climate Preparedness and Adaptation Strategy

Presentation to the Joint Committee on Disaster  
Recovery and Climate Resilience

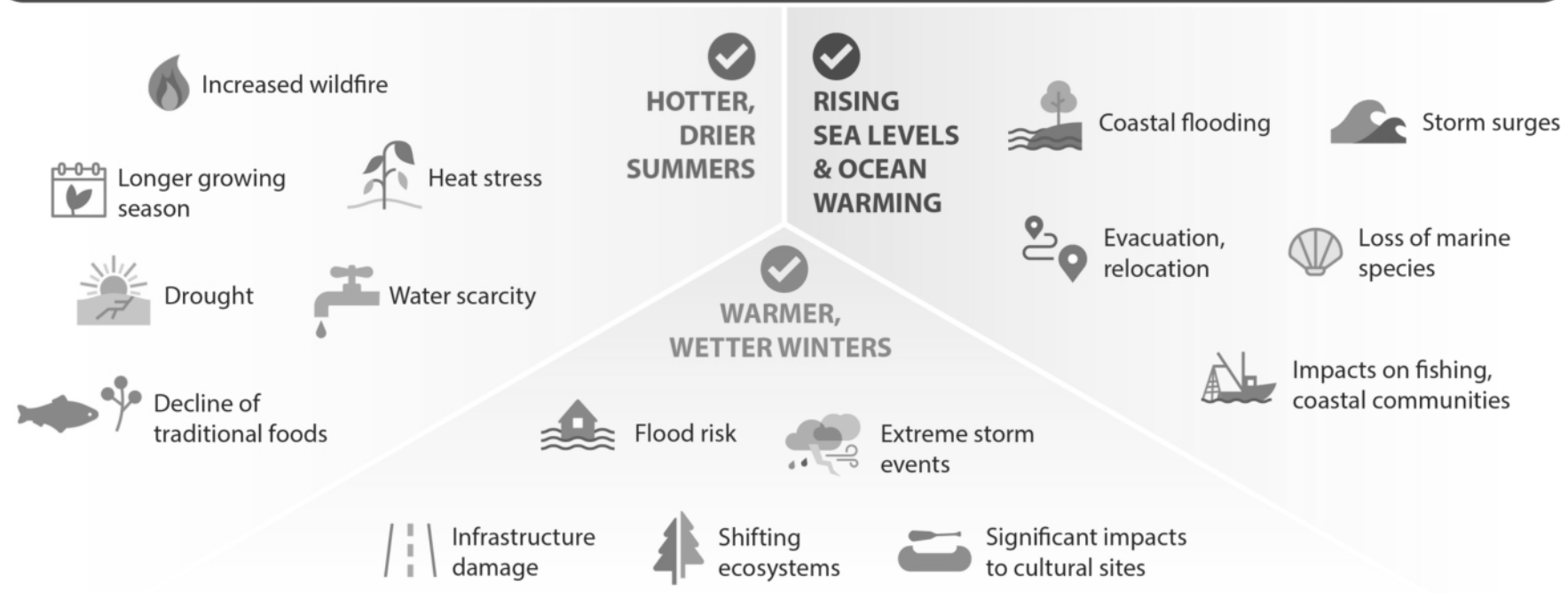
June 10, 2022



Ministry of  
Environment and  
Climate Change Strategy

# B.C.'s Climate is changing

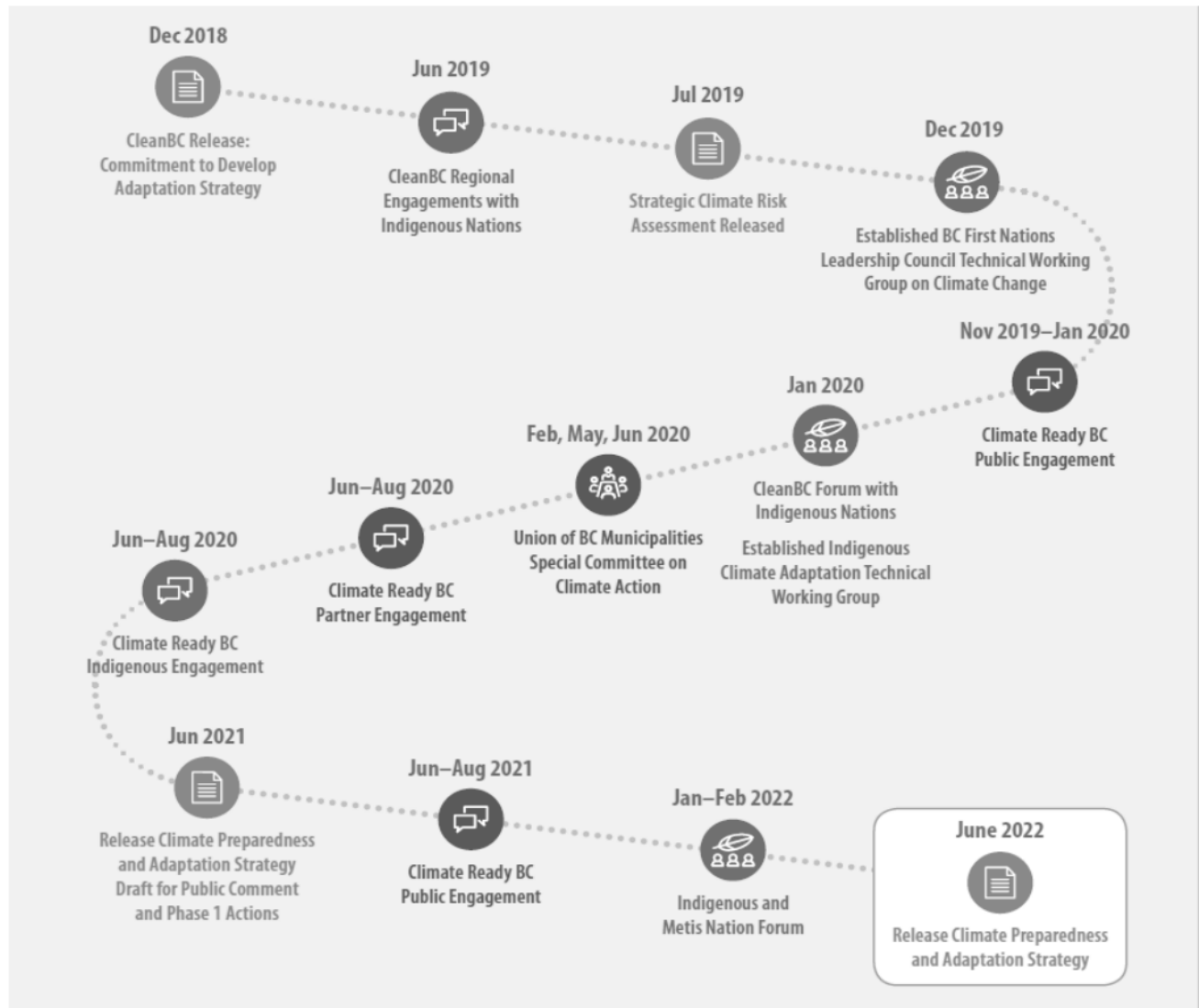
These changes will have important impacts for our communities, economy, health and wellbeing:



# Atmospheric River Event 2021

- November 2021 flooding in multiple river systems caused massive amounts of debris to be deposited in waterways and surrounding lands.
- Flood waters inundated cities and agricultural lands. BC has completed risk models for contamination and is engaging with First Nations and Local Authorities to address contamination concerns.
- BC is forecast to spend over \$700M over 2.5 years on debris clean-up and management of contamination of water, soil and sediment.

# Path to Releasing a Strategy



# Budget 2022 Context:

## CPAS and parallel initiatives

- Protecting People and Communities from Climate-Related Disasters
- \$2.152B (over three years, 2022/23-2024/25) to protect people and communities from climate-related disasters, while supporting efforts to build back better
- Over \$500M for actions that support forward-looking adaptation to climate change

# Budget Context:

## Overview of Strategy Funding

- Supports to Communities
  - Emergency preparedness **\$95M**
  - Wildfire prevention **\$90M**
- Provincial wildfire prevention projects and services **\$98M**
- Climate Preparedness and Adaptation Strategy **\$89M**
- Climate-ready transportation networks **\$65M**
- Local government climate action program **\$76M**
  - CleanBC Roadmap

**\$513M total**  
2021/22 – 2024/25



- Significant step forward for climate adaptation
- Responsive to 2021 extreme events
- Key foundational actions in data, capacity building and partnerships
- Sets the stage for future actions
- Commits to monitoring and reporting on progress

# Climate Preparedness and Adaptation Strategy

## Actions for 2022-2025



## Actions in 4 Pathways

- **Pathway 1:** Foundations for success: partnerships, knowledge and decision making
  - Climate data, monitoring, research, and predictive services
- **Pathway 2:** Safe and healthy communities
  - Indigenous-led climate adaptation knowledge and capacity building; B.C. Flood strategy, floodplain mapping
- **Pathway 3:** Resilient species and ecosystems
  - Healthy Watersheds Initiative; Coastal Marine Strategy; Wild Salmon Strategy
- **Pathway 4:** Climate ready economy and infrastructure
  - Low carbon resilient public sector buildings; extreme weather preparedness in agriculture; strategic framework for tourism

# Need to work in partnership

- Building on existing relationships e.g. national and regional climate service provider's network
- National Adaptation Strategy: Identify shared priorities and opportunities for collaboration
- FNLC Climate Strategy and Action Plan: Identify opportunities for collaboration



## Speaking Notes for

**George Heyman**

Honourable Minister of Environment and Climate Change  
Strategy

### **Joint Committee on Disaster Recovery and Climate Resilience**

*British Columbia's Climate Preparedness and Adaptation  
Strategy*

**June 10, 2022**

- Greeting and territorial acknowledgement
- Today it is my pleasure to present brief you on our upcoming Climate Preparedness and Adaptation Strategy (CPAS).

### *Slide 2*

- B.C.'s climate is changing, bringing a range of impacts to our communities.
- In January, we had an excellent presentation from Environment and Climate Change Canada on those forecasted changes.
- The impacts of a changing climate have been highlighted in the extreme weather events of 2021: first a summer heat dome, followed by an extreme wildfire season then the devastating flooding events in the fall.
- But the impacts are much wider than emergency events.

### *Slide 3*

- The province released a preliminary strategic climate risk assessment in 2019 that assessed 15 climate risks anticipated to impact B.C. by the 2050s.
- The most significant risks include disaster events like wildfire and flooding as well as slow-onset risks like water shortage, glacier loss and ocean acidification.
- It's worth noting that heatwave and flooding events we witnessed in 2021 exceeded the scenarios that were considered in the provincial risk assessment. The impacts are already upon us and are greater and more costly than we anticipated.

### *Slide 4*

- Debris removed from watercourses to date: Buildings and building materials, vehicles, roads and bridges, high-risk woody debris (large trees, logs, utility

poles). Over 320 tons of small and medium debris has been collected and removed along the edges of watercourses.

- Contaminants of concern from floodwaters: asbestos, bacteria (e. coli and fecal coliforms), pesticides and agricultural products, and hydrocarbons.
- BC is now assessing areas at high risk of further flooding and erosion/landslide due to sediment deposited during the atmospheric river event.

### *Slide 5*

- The CPAS defines adaptation as proactively understanding and preparing for the changing climate and reducing climate-related risks.
- As I noted a moment ago, some climate impacts are related to sudden disaster events, such as flooding and wildfire, while others occur more slowly over time such as sea level rise, species and ecosystem shifts, and water shortages.
- I think this is a useful graphic. It highlights that it is not all about emergency management, though there is substantial overlap, and the impacts of wildfire, flooding, and heat, are key focuses in our upcoming strategy.

### *Slide 6*

- Our path to developing the strategy began with a commitment in CleanBC in 2018
- It is informed by the Preliminary Strategic Climate Risk Assessment for B.C.
- It is also informed by extensive engagement, stretching back to 2018 including with Indigenous peoples.
- And we made a substantial investment as part of Budget 2022 to ensure that the upcoming strategy was resourced.
- I'll briefly outline that funding, and then talk about some of the details of this strategy, which we'll be releasing on June 13<sup>th</sup>.

### *Slide 7*

- Budget 2022 committed \$2.152B over three years for recovery from the climate disasters of 2021 and to support climate adaptation and building back better
- Over \$500M within this envelope will fund actions that are forward-looking and climate adaptive.
- This is the package that will be released as B.C.'s Climate Preparedness and Adaptation Strategy.

### *Slide 8*

- The \$513M CPAS package includes funding for communities for flood, extreme heat and wildfire preparedness and mitigation.
- \$76M of that is committed for local governments and Treaty Nations to lead their own climate adaptation and GHG mitigation activities.
- It also includes funding to provincial agencies to increase our FireSmart activities on Crown lands, proactively adapt our highway system and a suite of other actions that were prioritized from the draft CPAS released last June.
- As you will see as I go through the next few slides, this is a cross government strategy involving multiple ministries with responsibilities for health, infrastructure, emergency management, natural resources and industry sectors.

### *Slide 9*

- So, with funding in place, the strategy, to be released shortly, represents a significant step forward in climate adaptation for B.C.

- It is responsive to the extreme weather events of 2021 with actions specific to extreme heat, wildfire and flooding.
- It also includes important actions related to data, research, capacity building and partnerships.

### ***Slide 10***

- The strategy organizes actions in four pathways covering foundational knowledge and partnerships, communities, species and ecosystems and the economy and infrastructure.
- I'd like to quickly touch on those pathways, since it gives a good sense of our overall approach.

### ***Slide 11***

- Pathway 1: Foundations for Success: Partnerships, knowledge and decision-making.
- Key actions:
  - Enhance climate data, monitoring and research, including predictive services and early warning systems
  - Improve understanding of climate-related risks in British Columbia
  - Bring climate change considerations into governance and decision-making, including relationships with Indigenous Nations;
  - Launching an Indigenous Capacity-building pilot project
  - Enhance education on climate risks and adaptation: K-12 curriculum, public education, and learning resources for professionals

### ***Slide 12***

- Pathway 2: Safe and healthy communities.
- Key actions:



- Work with Indigenous Nations, local governments and other organizations to reduce risks from heatwaves, flooding & wildfires
- Continued support via the Community Emergency Preparedness Fund
- Local Government Climate Action Program
- Indigenous-led climate adaptation knowledge and capacity building
- Wildfire prevention & mitigation: FireSmart, cultural & prescribed burning
- Flood management: Flood strategy, floodplain mapping
- Develop a heatwave response framework
- Invest in a climate-resilient health system

### ***Slide 13***

- Pathway 3: Resilient species and ecosystems.
- Key actions:
  - Watershed stewardship and restoration through the Watershed Security Strategy and Fund
  - Continued investment in Healthy Watersheds Initiative
  - Establish an Ecosystem Forecast Centre to better understand and manage climate impacts to forest health
  - Ongoing work to develop a Coastal Marine Strategy and Wild Salmon Strategy
  - Ocean Acidification and Hypoxia Action Plan
  - Climate change guidance for land use planning

### ***Slide 14***

- Pathway 4: Climate-ready economy and infrastructure.

- Key actions:
  - Highway infrastructure climate adaptation program
  - Address geohazard risks and improve climate resilience of resource roads
  - Develop new design standards to support climate adaptation of new public sector buildings
  - Agriculture water infrastructure resilience and on-farm adaptation
  - Climate adaptation in forest landscape planning
  - Identify climate risks to tourism and plan for recovery and resiliency

### ***Slide 15***

- So, we're proud to be releasing this strategy.
- But we can't do this work alone.
- We all have to work together.
- Canada is coming out with a National Adaptation Strategy this year.
- And BC First Nations have recently come out with a Climate Strategy and Action Plan.
- So, we need to see where we can work together.
- I look forward to further discussions on that.
- We're all in this for the long haul, as you know.

### ***Slide 16 Questions/Conclusion***

- Thank you for the opportunity to present today. I am happy to answer any questions or address any concerns.

**END**

MGH BRIEFING | Soil Relocation

From: Carter, Elizabeth S ENV:EX <Elizabeth.S.Carter@gov.bc.ca>  
To: Carter, Elizabeth S ENV:EX <Elizabeth.S.Carter@gov.bc.ca>  
Sent: July 13, 2022 8:23:39 AM PDT

Meeting Info	
Topic	MGH BRIEFING   Soil Relocation
Date and time	June 15th at 2:00pm
Staff Attendees	MGH, Laurel Nash, Sonya Sundberg, Kevin Jardine (TBC), Kevin Butterworth, Danielle Grbavac, Valentina Yetskalo
Cliff Log #	390055
eApprovals #	
Meeting Follow-up, Actions and Notes	
MGH MA present (name):	
Action Items	none
Additional info/comments	none
ADMO Action	
DMO Action	

Liz Carter | Program Assistant

She/her  
Assistant Deputy Minister's Office | Environmental Protection Division  
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🌐 Please consider the environment before printing

*I respectfully acknowledge, that I live and work in the territory of the Lekwungen-speaking peoples.  
Today, Lekwungen refers to the Songhees and Esquimalt First Nations Communities and their descendants.  
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## INFORMATION NOTE

**DATE:** June 21, 2022

**PREPARED FOR:** Honourable George Heyman, Minister of Environment and Climate Change Strategy

**ISSUE:** Impact of Wildfires on Bears and Increasing Human-Wildlife Conflict

### KEY FACTS:

- Wildlife behaviour is impacted by wildfires, which can change forested habitat and natural food sources, as well as displace animals temporarily.
- These impacts have the potential to create more opportunities for human-wildlife conflicts as bears are driven further afield in search of food.
- Residents living near communities impacted by wildfires, such as the Thompson and Okanagan regions, may see more bears along roads and in communities.
- However, with so many variables that can contribute to human-wildlife conflicts, it is challenging to say that conflict statistics only directly correlate with wildfires.
- B.C. has a healthy black bear population and unsecured attractants can lure bears into communities, creating conflicts. It is especially important for residents to ensure attractants, such as garbage, pet food and birdseed, are properly secured.
- Securing attractants is the single best way to keep people, and bears, safe. Bears that are conditioned to non-natural food sources are not candidates for relocation or rehabilitation.
- Conservation Officers across the province respond to the highest human-wildlife conflicts calls, with respect to public safety.
- Conservation Officers and wildlife biologists are not aware of an increase in cattle depredation from black bears in response to any Ministry of Forests closures.

### BACKGROUND:

- As the frontline environmental law enforcement and public safety agency in B.C., the Conservation Officer Service (COS) is the lead agency in human-wildlife conflicts public safety response.
- Across the province, the COS takes extensive action to minimize the risks that conflicts with wildlife pose to public safety and property through conflict prevention outreach, training, enforcement, and responses in the field.
- However, the issue of human-wildlife conflicts is complex and cannot be solved by the COS alone.

- Attractants drive a significant number of bear conflicts in B.C. and enforcement by the COS alone is not enough to make a significant impact. Due to the overwhelming scale of the attractant issue, Conservation Officers are unable to adequately address non-compliance.
- With the growing population of B.C. and the expansion of communities into wildlife habitat, human-wildlife conflicts are increasing. Last year, the Report All Poachers and Polluters (RAPP) hotline received more than 42,000 human-wildlife conflicts calls.
- In terms of bear activity in communities, the months following wildfire season are traditionally among the busiest for Conservation Officers across the province. Fall sees bears actively searching to pack on calories in preparation for winter dormancy.
- Agricultural practices also present their own attractant-related problems. Wildlife is attracted to both crops and livestock. This can lead to habituation, food conditioning and influence population dynamics.
- Data gathered through the Livestock Protection Program, which we understand BCCA is a part of, would be the best way to track ongoing cattle depredation statistics.
- Conservation Officers have very limited enforcement authorities to deal with agricultural practices.
- The COS is always willing to work with municipalities to help reduce human-wildlife conflicts, as everyone has a role to play.

#### **Human-wildlife conflicts statistics in wildfire-affected communities:**

- The below table shows the number of human-wildlife conflicts over the last five years in Kamloops and Kelowna; two communities impacted by wildfires.
- In 2019 and 2020, cooler, wetter growing seasons provided favourable conditions for natural forage for black bears, which should have reduced conflicts. This can result in healthy sows with good reserves throughout dormancy, which may produce, in some cases, multiple cubs.
- These conditions were also favourable for cub survival.
- Of note, 2017 and 2021 were particularly bad wildfire years. Last year was an especially hot and dry spring, summer, and fall, which impacted natural food availability for bears and likely led to bears seeking non-natural food sources, putting them in conflict in communities.
- The data suggests bear complaints increased in the Kamloops area, likely in part due to wildfire impacts. Prolonged hot and dry conditions last year would have affected vegetation more than in 2017. While the statistics could simply demonstrate the effect of these prolonged conditions, it is likely the wildfire effect is being seen in Kamloops, which was surrounded by fires in 2021.

KAMLOOPS	2017	2018	2019	2020	2021
July	62	67	73	82	85
August	128	56	149	79	232
September	132	57	127	131	271
October	93	40	80	121	214

KELOWNA	2017	2018	2019	2020	2021
July	48	63	113	169	170
August	109	63	160	157	363
September	136	123	257	191	317
October	135	106	117	152	196

- So far this year, despite a favourable season for natural food sources – albeit slightly delayed vegetation and berries due to cooler temperatures – the COS is expecting a return of bears to communities that were in conflict last year.

## DISCUSSION:

The COS is continuing collaborative efforts with partner agencies, such as municipalities, organizations and advocacy groups, to help promote attractant management and reduce human-wildlife conflicts.

This includes working with farmers and ranchers on ways to help reduce livestock losses, such as the importance of livestock husbandry practices.

Conservation Officers recognize that ranchers in particular are seeing a healthy bear population in the wildfire-impacted areas this spring as new vegetation emerged after the earlier fires.

### On Attractant-Related Enforcement:

Under the provincial *Wildlife Act*, it is an offence to leave attractants accessible to dangerous wildlife such as bears. Some municipalities have bylaws that mirror this prohibition. To reduce human-wildlife conflicts, Conservation Officers conduct provincewide bear attractant compliance inspection audits that often result in enforcement action.

During audits, Conservation Officers patrol neighbourhoods and other areas to ensure attractants are properly secured. This can mean that bear-proof bins are used, excess fruit has been picked from trees and electric fencing is used around livestock.

Conservation Officers use tools such as Dangerous Wildlife Protection Orders, tickets, and fines to address non-compliance with bear attractant legislation.

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## INFORMATION BULLETS

**DATE:** June 22, 2022

**PREPARED FOR:** Honourable George Heyman, Minister of Environment and Climate Change Strategy

**ISSUE:** Treasury Board Submission with impact to the Conservation Officer Service

### KEY FACTS:

- The Wildlife Accord is a principal component of BC and Tahltan's commitment to create a world-class wildlife co-management regime in northern BC.
- In recent years, Tahltan has blocked access by recreational hunters to their territory.
- The recent announcement of regulatory changes in the Northeast has also created additional pressure on the current regulatory approach in Tahltan territory.
- The implementation of the Accord will help stabilize the relationship with BC as IRR seeks a financial mandate to negotiate a comprehensive reconciliation agreement.
- Implementing the Accord prior to the fall 2022 fall hunting season is also designed to help reduce ongoing tension between Tahltan members and recreational hunters.
- The Accord requires a fiscal commitment to Tahltan for implementation, as well as additional provincial wildlife staff for collaborative work, including:
  - Undertaking wildlife inventories;
  - Predator research;
  - Joint patrols;
  - Inspections;
  - Monitoring of hunter activity, and
  - Stakeholder engagement.
- To support the Accord commitment to enhanced compliance and enforcement, a second Conservation Officer in Dease Lake is required.
- The hiring and posting of this additional officer to Dease Lake – for up to four years – would be a cost neutral approach for the COS.

s.17

- This approach is supported by the COS and C and E Division Executive.



- Provincial staff have communicated to Tahltan negotiators the COS commitment is contingent on there being no denial of hunter access through blockades or other means.

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