

## BRIEFING NOTE FOR INFORMATION

**DATE:** May 26, 2024

**PREPARED FOR:** Honourable Nathan Cullen, Minister of Water, Land and Resource Stewardship

**ISSUE:** Drought Impacts on Wildlife

### KEY POINTS:

- Wildlife can be negatively impacted by drought conditions. These impacts are likely localized, and in the short term may be less significant than drought impacts to fish, which can be severe.
- Much like drinking water concerns, extended drought can have significant impacts on wildlife and multi-year drought conditions can have broader population effects (e.g. weakened state, more susceptible to diseases, having to travel farther for water, etc.)
- Drought is also known to increase human wildlife conflicts in interface areas as animals seek forage or predators seek prey/alternate food (e.g. bears).
- The public is reminded not to feed or provide water to wildlife under any circumstance due to risks of disease and habituation, which can lead to increased conflict.

### BACKGROUND:

- Drought conditions are currently present in parts of the province, particularly centrally and in the Northeast, and expected to worsen. There are risks of extreme drought conditions for the summer of 2024.
- Species that have generally evolved in drier environments, like coyote and deer, are fairly adapted and resilient to drought conditions. Other species, like moose and grizzly bear, are better adapted to colder environments, and high temperatures combined with lower water availability can negatively impact their health.
- Drought can impact forage supply in that less water leads to less vegetation. This is commonly noticed as reduced juvenile survival the following winter.
- Investments in the short-term that improve landscape resilience and ecosystem health (e.g., prescribed and cultural fire, restoration of degraded habitats including wetlands and riparian areas, access management, etc.) will help to mitigate impact and increase the ability for populations to recover more quickly.

### DISCUSSION:

- British Columbia has over 20,000 lakes, 750,000 km of streams, and millions of swamps/marshes; water is generally available to wildlife, however, in drought conditions wildlife may need to travel greater distances to find water.
- There has been limited research on the impacts of drought on wildlife in BC and therefore a knowledge gap on impacts.
- Wildlife can gather at increased density around water sources in times of scarcity. This can increase the risk of disease transmission.

- When wildlife are stressed, people may wish to artificially feed or water individuals or populations. This practice is strongly discouraged as it can increase the level of conflict with humans, and further increases the risk of disease transmission.
- If a population experiences a large-scale die off, for any reason, recovery may be accelerated by protecting areas from disturbance (including access) and changing hunting regulations for harvested species.

#### **INDIGENOUS PEOPLES:**

- Fish and wildlife health are critically important to the cultures and way of life for Indigenous Peoples. They are a foundational element to wild food security. Conservation and recovery of fish and wildlife are a critical aspect of managing for Indigenous Rights.

#### **CONCLUSION:**

- The impact on fish and aquatic ecosystem from extensive drought can be severe, which has a direct impact on wildlife.
- Increased human-wildlife conflict can occur as animals that are food or water stressed may frequent communities.
- Public watering for wildlife is not recommended as it both increases the risk for human-wildlife conflict, and increases disease risk.
- Proactive preparations should continue to focus on broad landscape resilience investments and increasing community awareness to reduce risk of human-wildlife conflicts.
- Research is needed to support well-informed management decisions to support wildlife through prolonged periods of drought.

**Attachment:** B.C. Drought Preparedness Update, April 23, 2024. WLRs Executive Update

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#### **REVIEWED BY:**

	Initials	Date
DM	LH	May 28, 2024
CFO/EFO (if required)		
ADM	JP	May 26, 2024
Program Dir/Mgr.	LW & RE	April 29, 2024

# B.C. Drought Preparedness Update

*WLRS Executive Meeting  
April 23, 2024*

*James Mack*  
Watershed Stewardship and Security Branch  
Ministry of Water, Land and Resource Stewardship

# Outline

1. Drought outlook 2024
2. Check-in on Commitments
3. Focus topics
  1. Governance
  2. Communication
  3. Drinking Water
  4. Fish and Aquatic Habitat



# 2024 Drought Outlook

- Challenging to accurately predict; keep in mind variable temperature, snow melt, and rain conditions through spring and summer
- Indicators strongly suggest drought conditions will persist into 2024
  - As of April 1st, the average snowpack across BC was 63% of normal
  - Lowest snowpack since 1970
  - Streamflow and groundwater levels remain relatively low in many areas and are slow to recharge from 2023 season
  - El Niño winter (warm) conditions promote low snowpack and early freshet

We are preparing for an elevated risk of drought in 2024

# Our Commitments for 2024 (to Govt)

## Better Preparation

- ✓ Early preparedness and communications with sectors and public
- ✓ Establish Regional Drought Advisory Tables and Response Plans
- ✓ Agricultural Water Infrastructure program
- ✓ Track drinking water scarcity vulnerability
- ✓ Emergency Response Contingency Plans for drinking water

## Earlier Conservation

- ✓ Encourage voluntary water use reductions
- ✓ Encourage local authority conservation actions
- ✓ Directly engage water licensees
- ✓ Determine and monitor flow thresholds for aquatic ecosystem health

## Graduated Compliance

- ✓ Work with unauthorized use in drought-prone areas
- ✓ Encourage compliance with water licence terms
- ✓ Action compliance tools under WSA

## Escalation Ready

- ✓ Clear escalation pathway to consider emergency declaration
- ✓ Ready to action temporary water use transfer agreements
- ✓ Stand-up Emergency Response if needed

# Better Preparation

## Better Preparation

- ✓ Early preparedness and communications with sectors and public
- ✓ Establish Regional Drought Advisory Tables and Response Plans
- ✓ Agricultural Water Infrastructure program
- ✓ Track drinking water scarcity vulnerability
- ✓ Emergency Response Contingency Plans for drinking water

Mostly complete – a few still in process

- Media and ministerial communications ongoing, letters being mailed out to water licensees with water billing, letters have gone to utilities, improvement districts, local government water suppliers
- The intent of drought advisory tables is being implemented (see next slide) and each Region will activate a Regional Drought Technical Working Group
- AWIP launched
- Drinking Water scarcity vulnerability tool ready - survey of water suppliers process created, rapid report template and process for Water Hazards Sub-Com to action in place, weekly briefing to government ready, workshop with water suppliers started April 22nd
- Emergency response contingency plans for drinking water underway – scenario-based response planning exercise for April 25th



# Regional and Advisory Drought Tables

## Region Technical Drought Working Group Leads & Fish Leads

West Coast	South Coast	Thompson /Okanagan	Kootenay / Boundary	Cariboo	Northeast	Omineca	Skeena
Lead: Jaroslaw Szczot	Lead: Jacquelyn Shrimmer	Lead: Nicole Pyett	Lead: Barry Watson	Lead: Elliott Morton	Lead: Liia Schilds	Lead: Jay Hallett	Lead: Abby Morgan
Fish lead: TBD	Fish lead: TBD	Fish lead: TBD	Fish lead: TBD	Fish lead: TBD	Fish lead: TBD	Fish lead: TBD	Fish lead: TBD

## Drought Advisory Tables (green = work in progress – Note ARGRI conversations also underway)

West Coast	South Coast	Thompson /Okanagan	Kootenay / Boundary	Cariboo	Northeast	Omineca	Skeena
<b>Leads:</b> <b>Arlette Malcolm &amp; Matt LeRoy</b>  Koksilah & Cowichan via Cowichan Watershed Board	<b>Lead:</b> <b>Scott Barrett</b>  Sechelt via Sechelt Water Technical Working Gp.	<b>Lead: Eric Valdal</b>  Current areas of focus include Salmon River, Westwold / Bessette, Nicola (NWGP) Okanagan (Syilx collaborative partnership table), Similkameen  Work is underway. Resource Stewardship, LUPSE and Permitting collaborating on implementation and design specifics.	<b>Lead: Eric Valdal</b>  Current areas of focus include Kettle River (West Kettle, Grandby, Kettle), Creston  Work is underway. Resource Stewardship, LUPSE and Permitting collaborating on implementation and design specifics.	<b>Lead: Eric Valdal</b>  Note during Estimates – Minister referred to DAT in Cariboo – to be confirm with ADM Anthony  Risk assessment underway	<b>Lead: TBC</b>  <b>Interim contact - Marianne Johnson</b>  Underway: MJ in Regular meetings with City of Dawson creek re alternative water supply  Options: North East Stakeholders Roundtable	<b>Lead: TBC</b>  Options Recommended by regional staff: Stony Creek Sinkut River Chilako River	<b>Lead: TBC</b>



# Regional and Advisory Drought Tables

- The intention of drought advisory tables is being achieved in different ways to accommodate existing forums and regional circumstances, and are being led by the “best-fit” ministry to the table members.
- The following slide summarizes the Permitting, LUPCE led work on Region and Advisory drought tables
- In addition, the Ministry of Agriculture (AGRI) is both participating in drought advisory tables (e.g. member of the Cowichan Watershed board) as well as leading drought advisory conversations with key agricultural sector representatives in higher risk/priority watersheds.
- Currently AGRI is leading drought advisory conversations with the agricultural sectors in the Nooksack river and Fishtrap creek (South Coast Region) watersheds.
- AGRI is in discussion with WLRS on the best approach to dialogue with the agricultural sector in other areas such as Salmon river and Creston valley.

# Earlier Conservation

## Earlier Conservation

- ✓ Encourage voluntary water use reductions
- ✓ Encourage local authority conservation actions
- ✓ Directly engage water licensees
- ✓ Determine and monitor flow thresholds for aquatic ecosystem health

In process

- All items have been actioned, most are ongoing

### Regarding Ecosystem Conservation

- **Action Plan for fish and aquatic habitat developed and implementation is underway.**
- Identifying high priority streams to add to watch list
- Developing species information backgrounds to support drought actions
- Preparing team and process to implement mitigative works to support fish/salmon populations
- Advancing work on aligning Angling Closures and WSA tools



# Graduated Compliance

## Graduated Compliance

- ✓ Work with unauthorized use in drought-prone areas
- ✓ Encourage compliance with water licence terms
- ✓ Action compliance tools under WSA

### To come during drought response

- Permitting is taking the lead on working with NRO's
- Build on strong collaboration and coordination between regional water staff and C&E staff when delivering notices or field investigations
- Will encourage groundwater users who missed the transition deadline to apply for a new use licence
- Regional water teams identifying priority areas for compliance & enforcement action
- Development of guidance for investigating and issuing administrative monetary penalties
- For groundwater users who missed the deadline, enforcement begins with those who have not yet applied for a licence
- Comptroller leading Minister's orientation on responsibilities under the WSA



# Escalation Ready

## Escalation Ready

- ✓ Clear escalation pathway to consider emergency declaration
- ✓ Ready to action temporary water use transfer agreements
- ✓ Stand-up Emergency Response if needed

## In Process

- Escalation ladder drafted and being scenario-tested, updated catalogue of response tools (legislative/policy) revised to include EDMA
- Water Hazards Sub-Committee steering all products/work
- Meeting planned for May for EMCR and WLRs detailed review of emergency response
- Department of Fisheries and Oceans Canada and WLRs committee to collaborate and coordinated on fish and fish habitat concerns during drought starting in May



# Tangible Evidence of Progress

## Complete

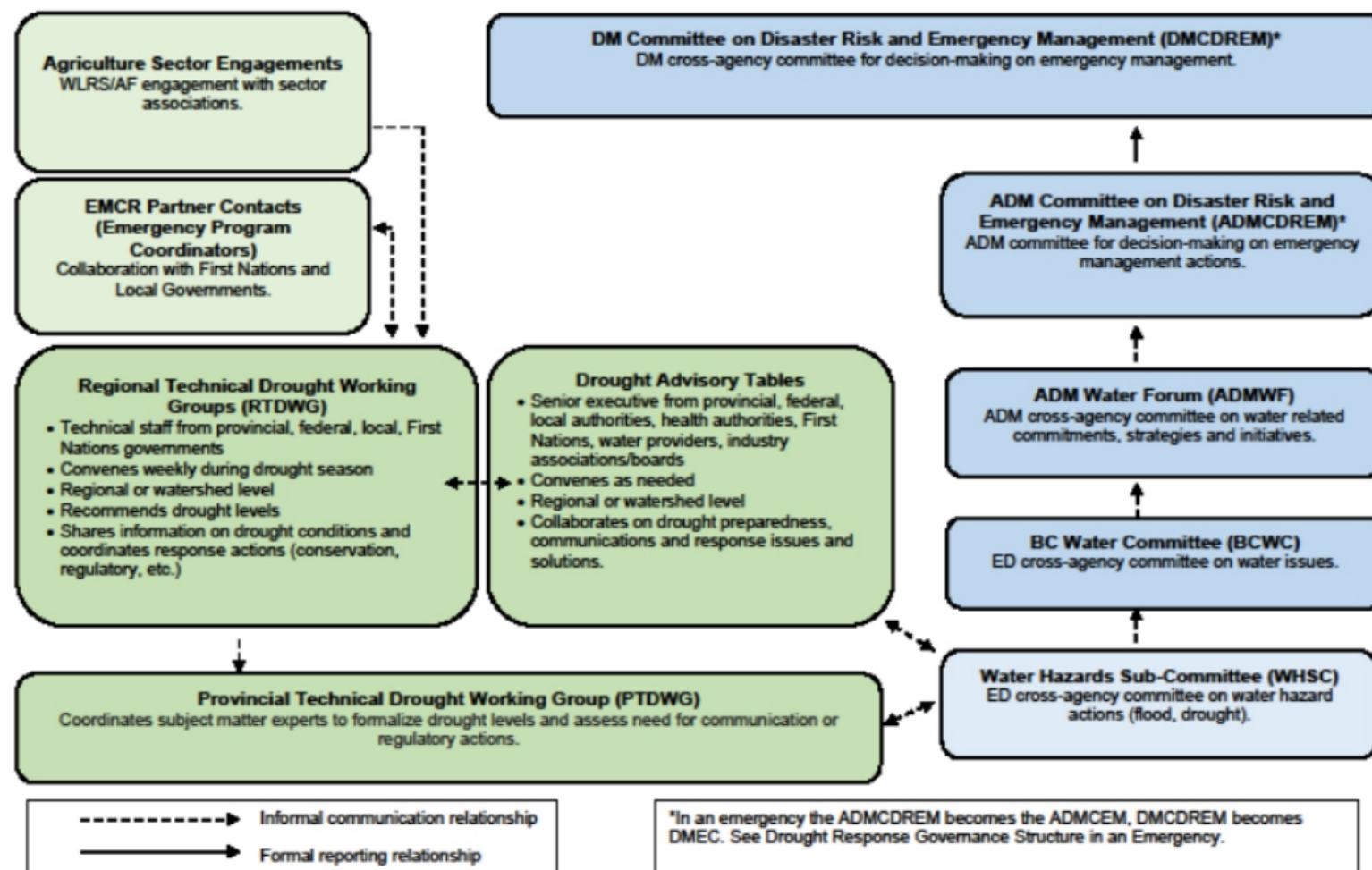
1. BC Gov Single stop drought landing page
2. Drought Response Governance Structure
3. Ministry of Agriculture – Sector Engagement
4. Drought Workplan Gantt Chart
5. Drought Communications Gantt Chart
6. TORs completed (BCWHSC, PTDWG, RTDWG)
7. Drought Leads recurrent meetings (Permitting)
8. Drought Advisory Tables TOR and chairpersonship
9. Drought Committees Implementation Companion Guide
10. Regional Drought Response Plan Template
11. IADWG sunset alternative dialogue pathways

## Projects Underway (not exhaustive list)

Ready in May and ongoing

1. Detailed Communications Plan (WMB lead)
2. B.C. Drought and Water Scarcity Response Plan (2024 update)
3. Handbook for Water Suppliers (2024 update)
4. Drinking Water Supply Dashboard (internal for govt)
5. Drought Response Emergency Escalation toolkit
6. Stream watch list updates
7. DFO / WLRS communication committee
8. Fish species information / risk for drought portal
9. Source Drinking Water Risk Assessment
10. Fish Risk Assessment
11. Weekly drought update for executive template / process

# Drought - Governance

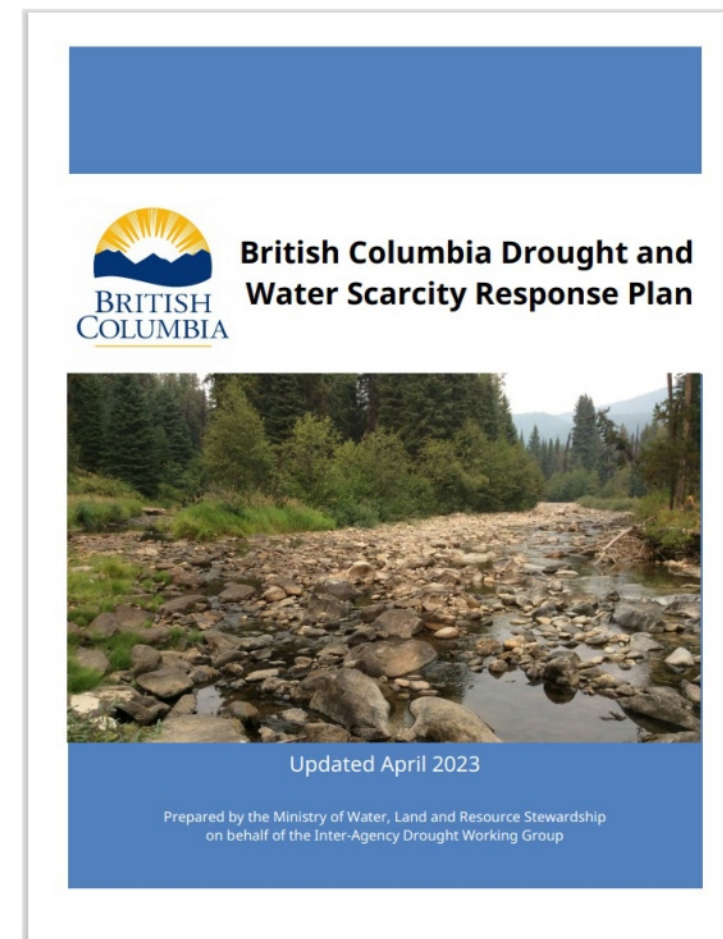


# B.C. Drought and Water Scarcity Response Plan

- Plan focuses on hydrological drought and water scarcity *response*
- *Response* = actions to take before, during and after drought
- Outlines responsibilities of many agencies at provincial, regional and local levels
- Focus is BC Gov structure and response to drought

Speaks to key BC Gov tools (examples, not exhaustive list)

- Describes drought indicators and drought levels
- Recommends actions under the *Water Sustainability Act*





# Drinking Water

## Current projects

- Communications focused on water supplier drought preparation
- Mapping drinking water systems in BC
- Drinking Water Supply Dashboard (internal to Province, but limited view version for Health Authorities is under development)



**DROUGHT PREP  
COMMUNICATIONS**



**MAP 5,000 DRINKING WATER  
SYSTEMS**



**DESIGN INTERNAL TOOLS**



# Fish and Aquatic Habitat

## Current projects

- Action Plan for fish and aquatic habitat developed and implementation is underway.
- DFO and WLRS communication structure
- Provide public education materials on fish and drought
- Aquatic Habitat Prioritization Tool
- Region fish/habitat expertise lead on each drought team
- Variation Order (angling closures) preparation
- Developing a plan to receive, action and monitor mitigation actions (in partnership with PSF).
- Develop CEFT guidelines (this year course filter direction)

