



Image credit:
City of Dawson Creek

Personal flood preparedness workshop



UBC SCHOLARS

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Meet the Scholars



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Masters of Arts in Resources,
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Masters of Science in
Geography



**Madelaine
Parent**

Masters of Urban & Regional
Planning

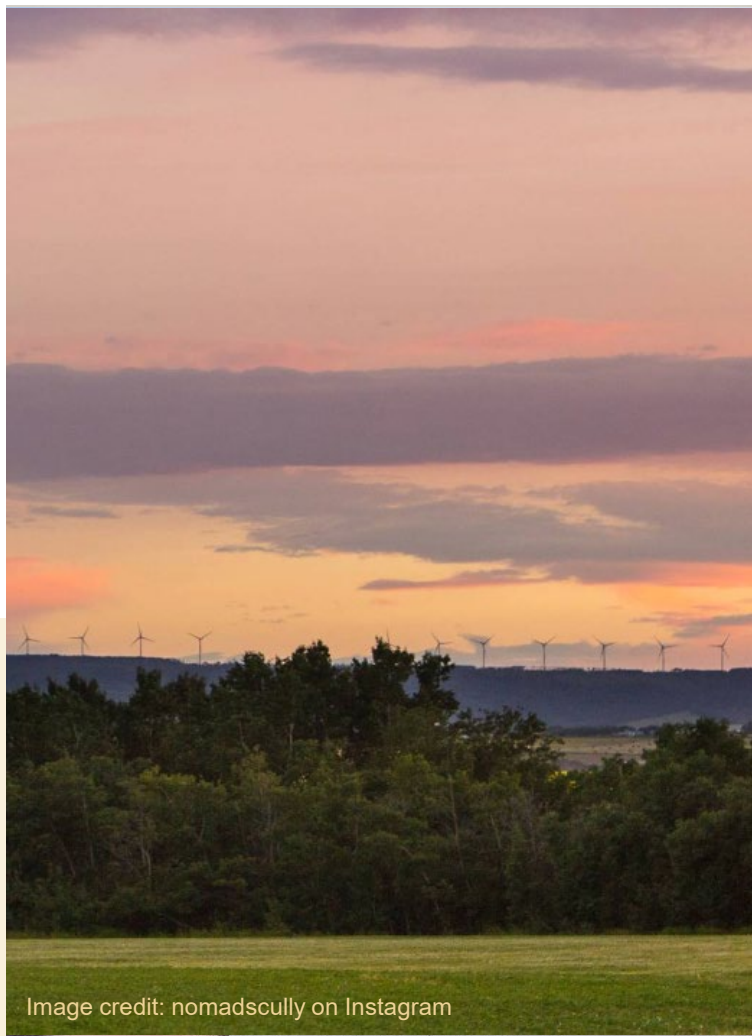


Image credit: nomadscully on Instagram

Land acknowledgment

We would like to acknowledge that we three scholars come to you from the traditional, ancestral, and unceded territory of the **Musqueam, Squamish and Tsleil-Waututh peoples.**

We would like to acknowledge that this workshop takes place on the traditional territory of the **Dunneza people** and signatories of the **Treaty 8 Territory.**

Workshop outline



The changing climate
in Northeast BC



Dawson Creek flooding
context

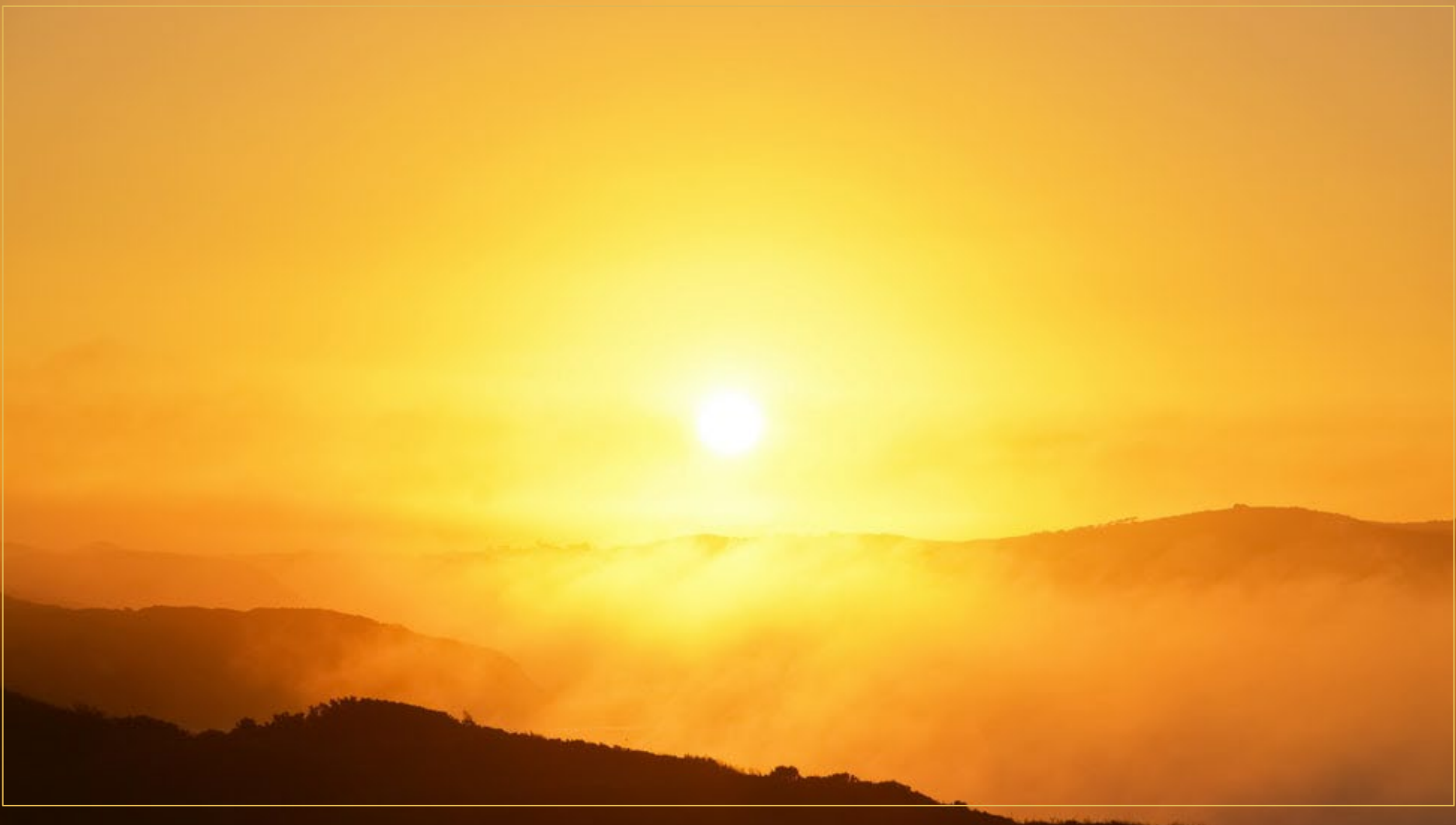


Personal flood
preparedness



Image credit: AllTrails

The changing climate in Northeast BC



What's the difference between weather and climate?

Weather ~ outcome of an individual game

Climate ~ average score over several seasons



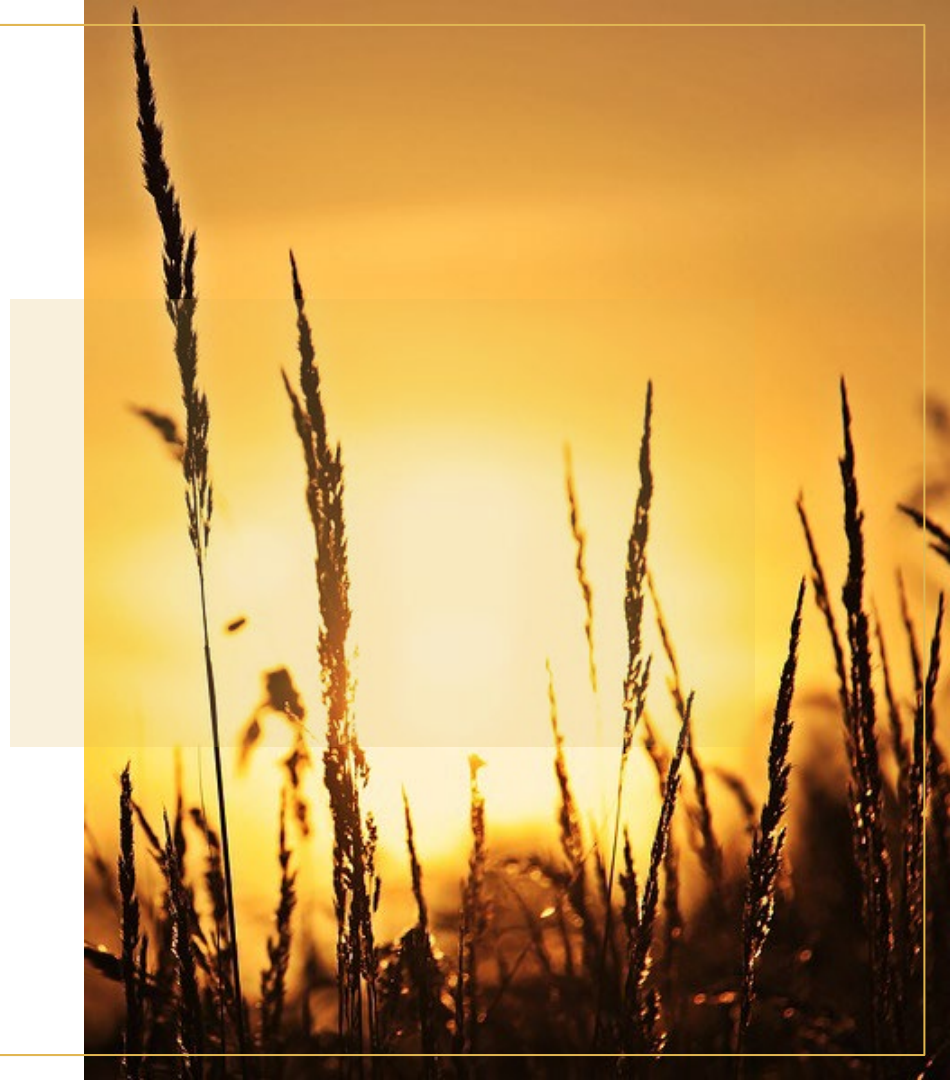
Image credit:
Dawson Creek Mirror


Hotter summers

Number of days above 25°C
and above 30°C has been
steadily increasing

	past (1971-2000)	present (2020s)	In three decades
>25°C	16 days/year	26 days/year	40 days/year
>30°C	1 days/year	3 days/year	10 days/year

Source: (Fraser Basin Council, 2019)





What to expect?

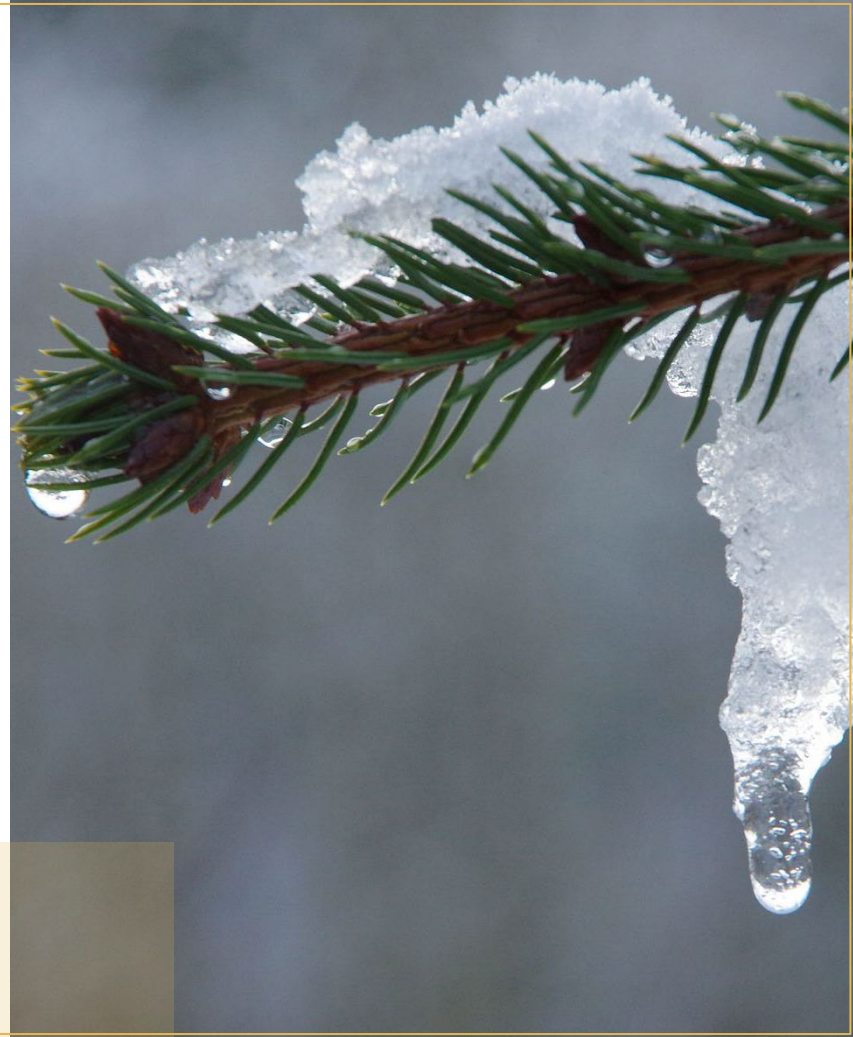
- Hotter and drier summers
- More extreme heat events
- Higher cooling demands
- Greater potential for droughts in late summer
- Higher risk of wildfires

Source: (Fraser Basin Council, 2019)

Warmer winters

- Less frost and ice days
- Greater potential for beetle infestation
- More frequent rain-on-snow events
- Less snowpack
- Earlier and more rapid snowmelt
- Increase in floods and droughts

Source: (Fraser Basin Council, 2019)





Increased precipitation

- Increase in total precipitation, particularly in spring and fall
- Increase in intensity and frequency of precipitation
- This can lead to more frequent:
 - sewer back-up
 - flooding

Source: (Fraser Basin Council, 2019)

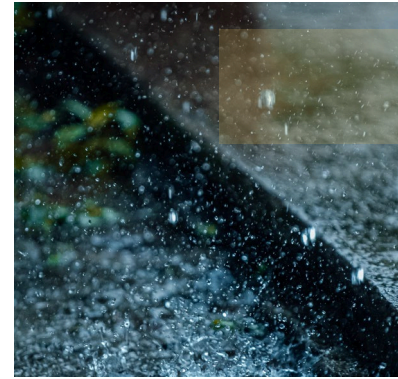




Rain-on-snow
events



Earlier and more
rapid freshet



More intense and
frequent precipitation

more frequent and intense
FLOODS



Image credit:
Owl Connected

Future floods will be more
intense and frequent than
those that Dawson Creek has
experienced so far

Source: (SHIFT Collaborative, 2019)



Image credit:
City of Dawson Creek

Impacts of floods

- Damage to buildings
- Mental health effects
- Increased stress on private layouts and sanitary sewer
- Street flooding and road closures
- Sewage backups
- Power outages

Source: (SHIFT Collaborative, 2019)



Image credit: AllTrails

Main takeaways

- Dawson Creek has already experienced the impacts of changing climate
- In the near future, the region is expected to experience hotter summers, warmer winters, and increased precipitation
- Extreme weather events (including floods) will increase in frequency and intensity
- Future can no longer be judged by past experience

STORYTELLING

Have you experienced climate change in your community?
Share your story.

How to engage:

- Think about your story
- In groups of 4, share your story (8 minutes)
- Return to the group and, if you want to, share your story with everyone (12 minutes)

Please, remember:

- Be respectful of other people's stories
- Nobody should feel forced to share
- It's okay if you don't have a story

Image credit: TravelNurse

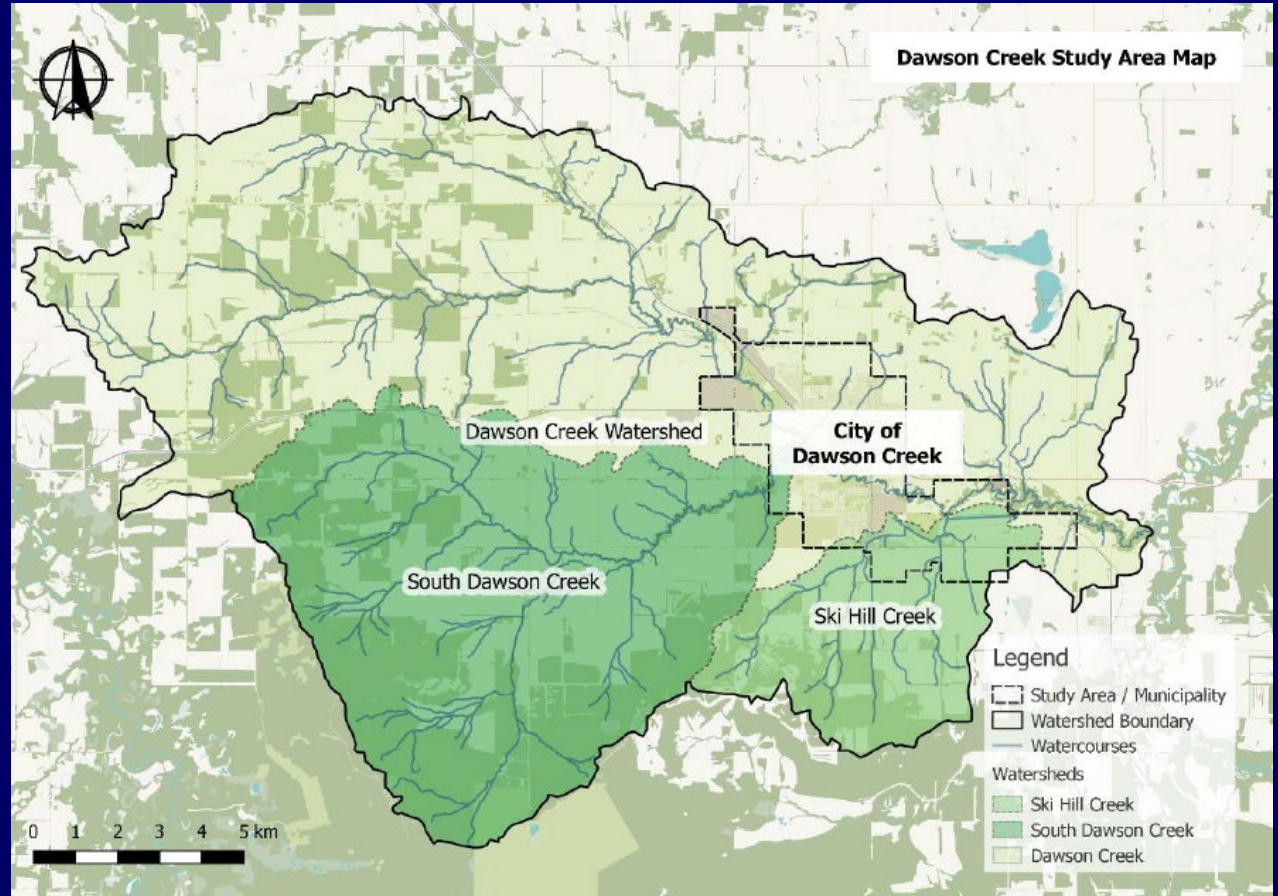
Local Flooding Context

02

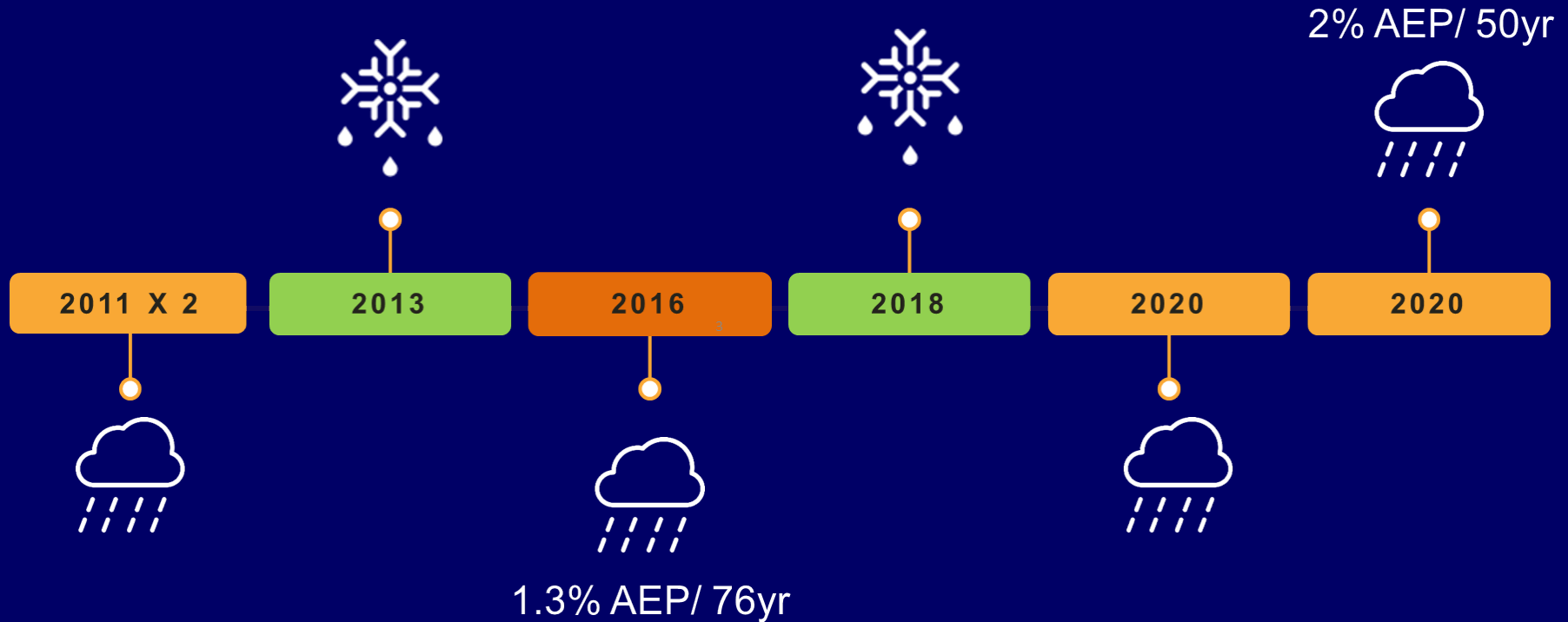


Image credit:
Energetic City

Dawson Creek Watershed



Historical Flood Events



Types of Flooding

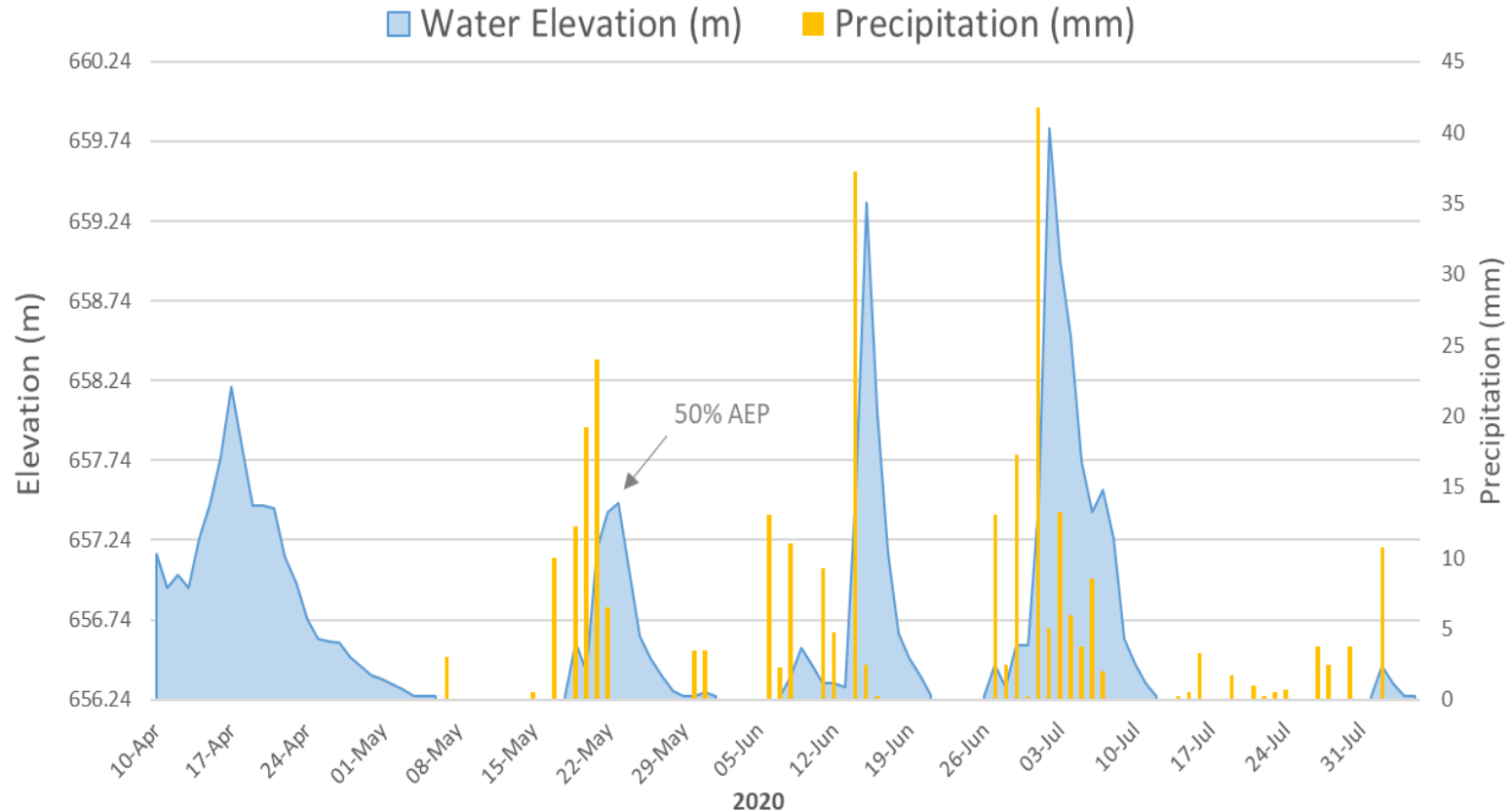
Creek Flooding



Pluvial Flooding



102 Avenue Water Elevation and Precipitation



2
0
1
6



15th Street Bridge

- Crossing removal & disposal, \$61,000 (June 2016)
- New bridge, \$1.2M (January 2017)

8th Street Crossing

- New bridge (construction expected fall 2018 - 2020)

Rolla (Snake Pitt) Road Crossing

- Temporary bridge (October 2016)
- Permanent new bridge (construction expected 2018 - 2020)

10th Street Bridge

- New bridge & approaches, \$3.4 M (November 2017)

Legend



Projects

Dawson Creek

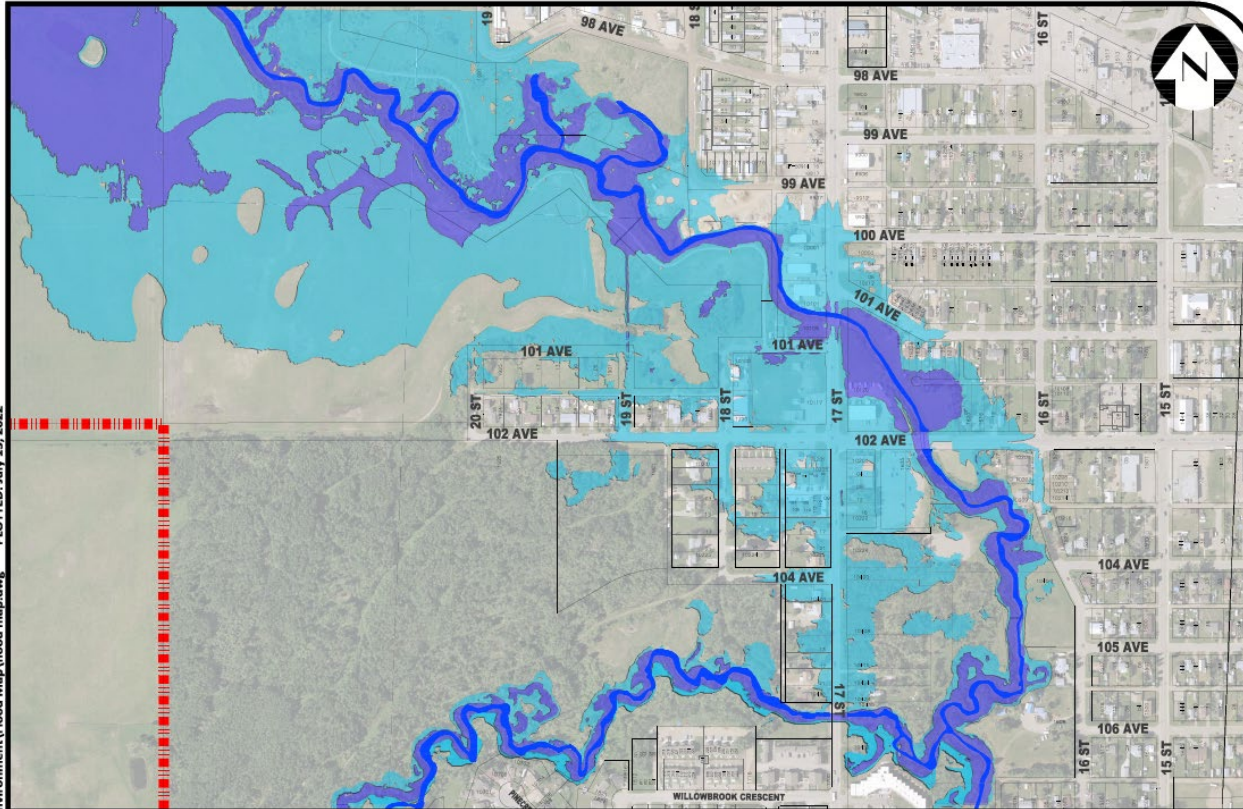
Emergency Response

- 2011 Flood Event, \$100,000
- 2016 Flood Event, \$300,000

Post 2016 Flood Mitigation Work

- Bridge Replacements (8th, 10th, 15th, Rolla Rd., 102nd)
- Water Level Monitoring
- Updated Flood Mapping
- Updated Floodplain Zoning
- Development of Flood Construction Levels





Flood Mapping

Flood Fringe:
<1m water depth

Floodway:
>1m water depth



LEGEND

- FLOOD WAY
>1m WATER DEPTH
- FLOOD FRINGE
<1m WATER DEPTH

THE CITY OF DAWSON CREEK

FLOODPLAIN
0.5% AEP / 200 YEAR

DATE: 2022-07-12

DWG: -

SCALE: NTS

PAGE: 1 OF 1

2020

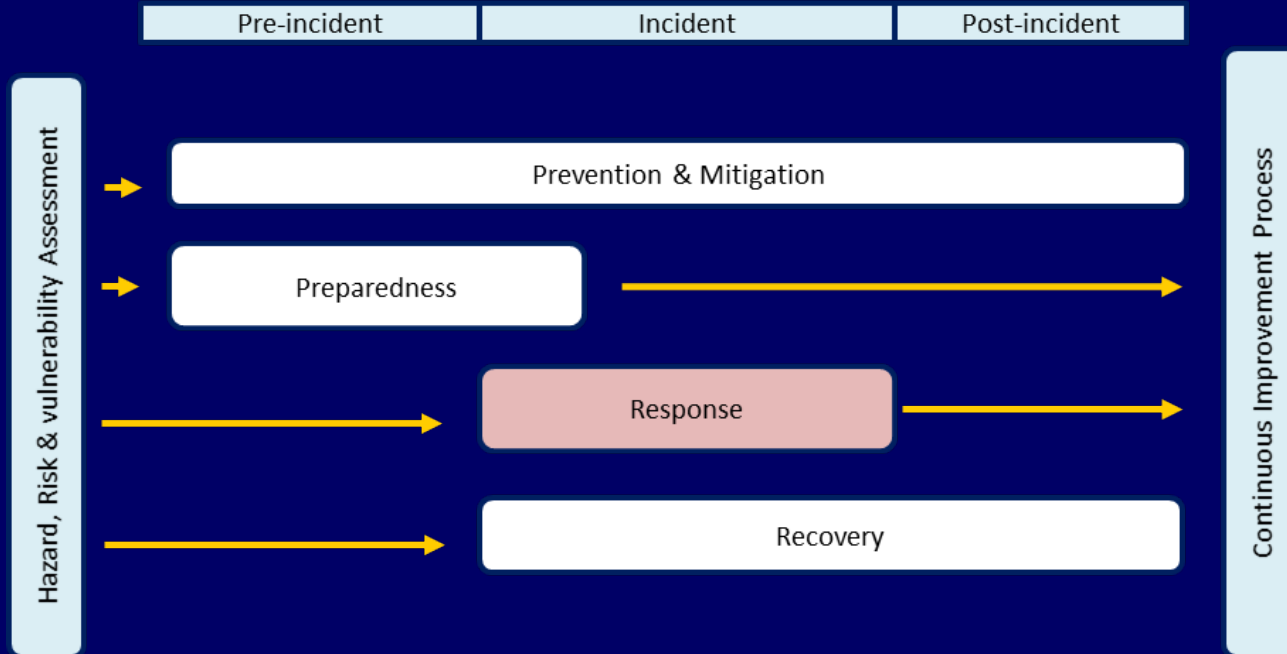


Post 2020 Flood Mitigation Work

- Staff Training
- Sanitary flushing
- Sanitary bypass pumping plans
- Development of a Sanitary Master Plan
- Revision of the City's Emergency Program



Emergency Management



Post 2020 Flood Mitigation Work

- Communication Plan
- Website Update

		
BE PREPARED	NORTH EAST BC EMERGENCY & PUBLIC ALERTS	VOLUNTEER
Emergency Kits	Sign Up for Alerts	Help Out

Emergency News

Personal Flood Preparedness Workshop on July 20, 2022

The City of Dawson Creek has teamed up...

[Read More »](#)

Heavy Rainfall in the Forecast for Dawson Creek

Grab your umbrellas! Heavy rainfall is in the...

[Read More »](#)

High Water Event Overview

From May 5-9th, the City received 38mm of...

[Read More »](#)

[View All Emergency News](#)

Get notified of important alerts in the Peace region.

Sign up for NEBC alerts

Register online at
nebcalerts.com



Or download the
Everbridge app



Break

Please make sure you can access menti.com and reply to the first question. All the responses are anonymous.

Go to

www.menti.com

Enter the code

2552 1480



Or use QR code



What is one word that comes to mind when you think about climate change?





Image credit:
City of Dawson Creek

Personal Flood Preparedness

Before the Flood

BRAINSTORMING

What measures can you adopt to *prepare* for flooding?

After logging into
Mentimeter, anonymously
share your ideas by typing
them in the app!



Preparing your Home

Know your Insurance:



If you are a renter, ask your landlord if your home has flood insurance. If not, suggest they get it!



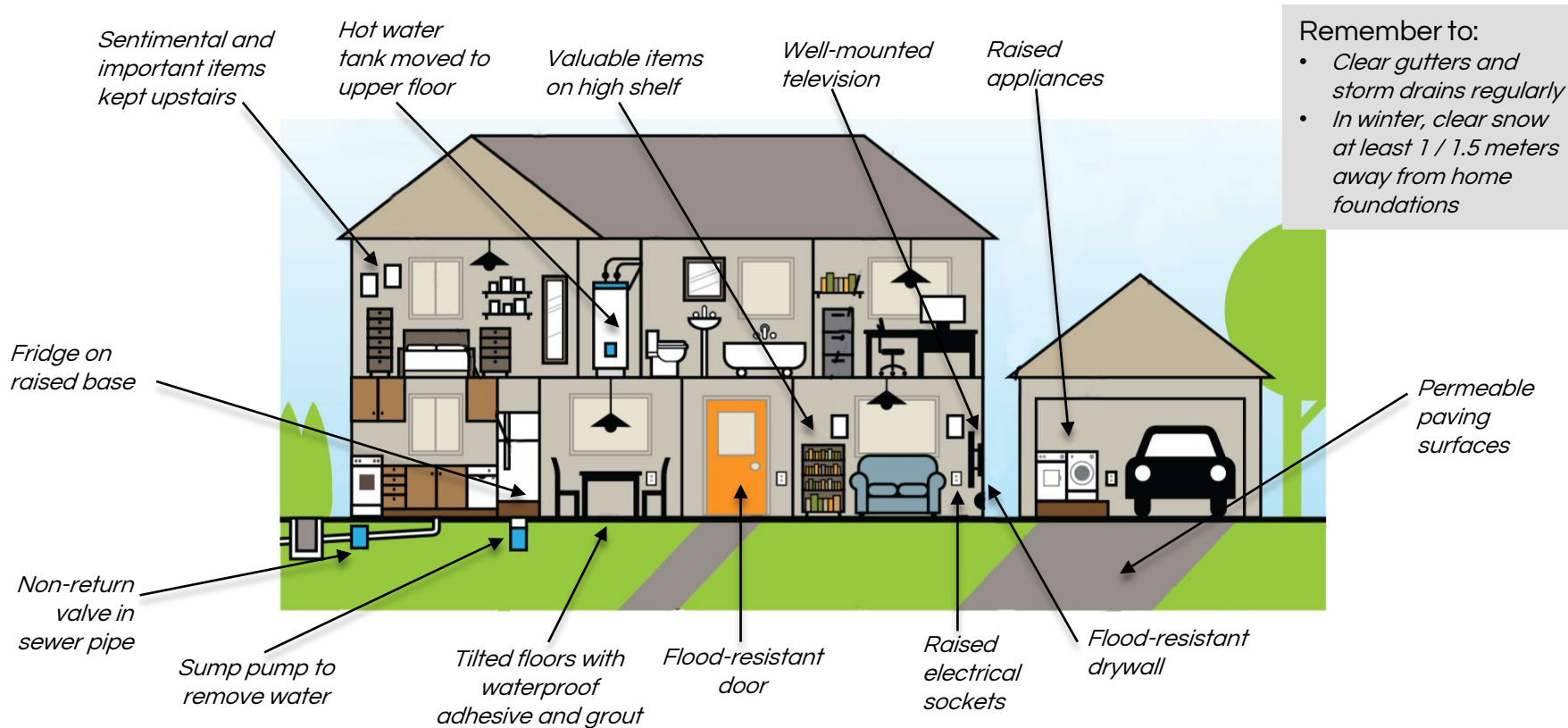
If you are a homeowner, remember that standard homeowner insurance often does not cover flood damage.



Still in doubt? Contact the Insurance Bureau of Canada at **1-844-227-5422**



Preparing your home



Preparing your home

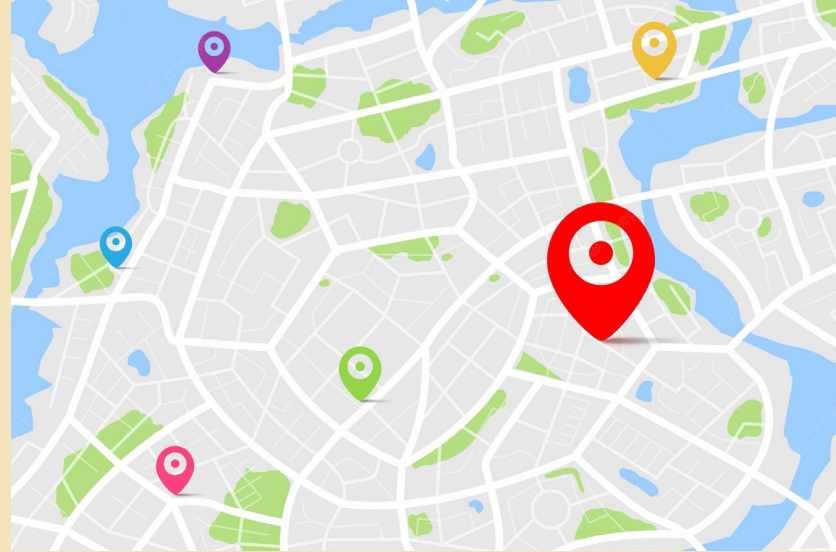
Can you locate yourself?



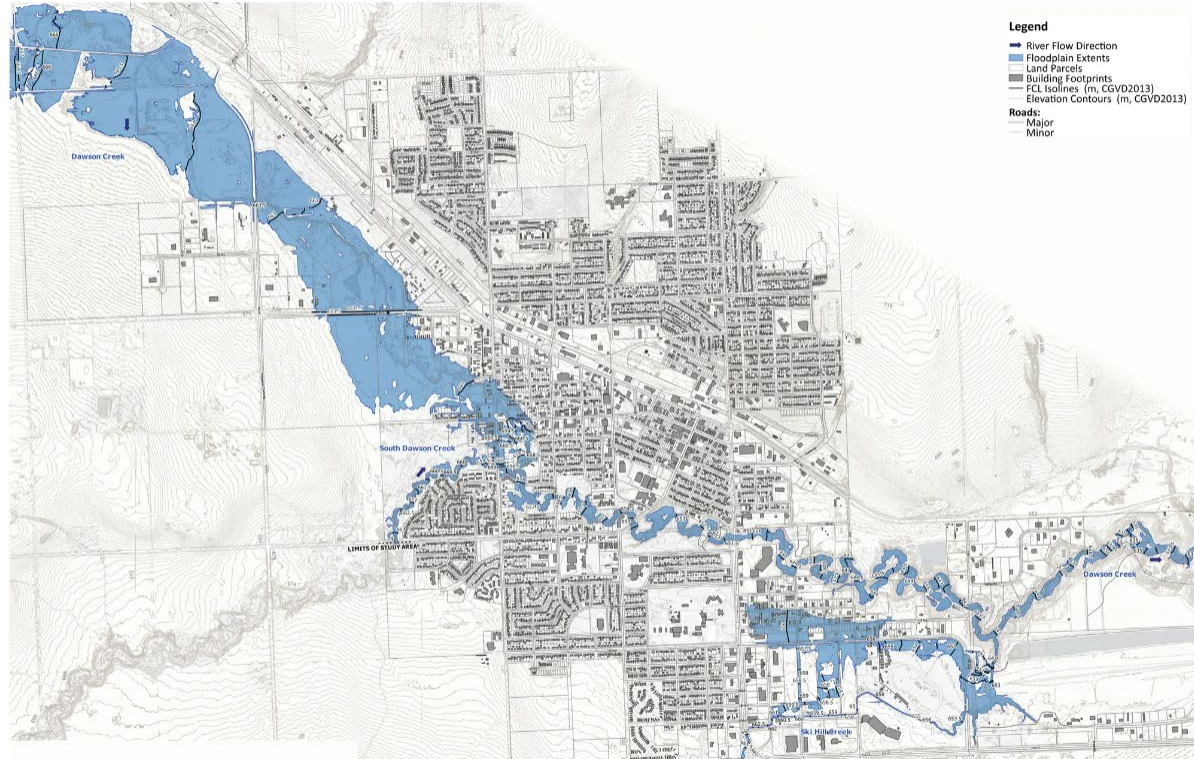
Being able to locate your house on a flood map is important, since it allows you to understand whether you live in an area with high risk of flooding

LET'S TRY!

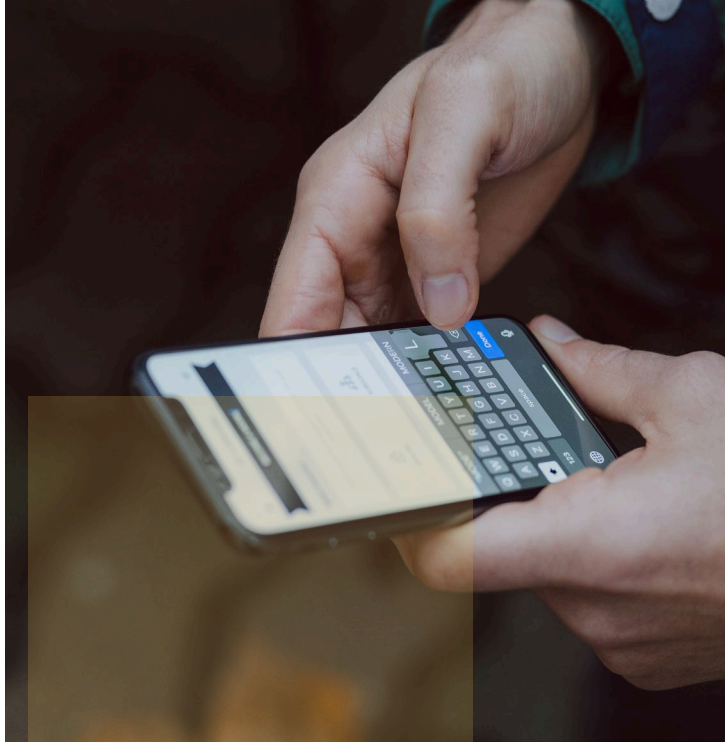
Open Mentimeter, you will see a map: find your neighborhood and place the pin where your house is located!



Drop the pin where you live!



Preparing for your own Safety



Sign up for the Alert System:

It is always better to know about an emergency before it happens. Sign up for *Everbridge*, the NEBC Alert System at <https://member.everbridge.net/453003085617750/new>



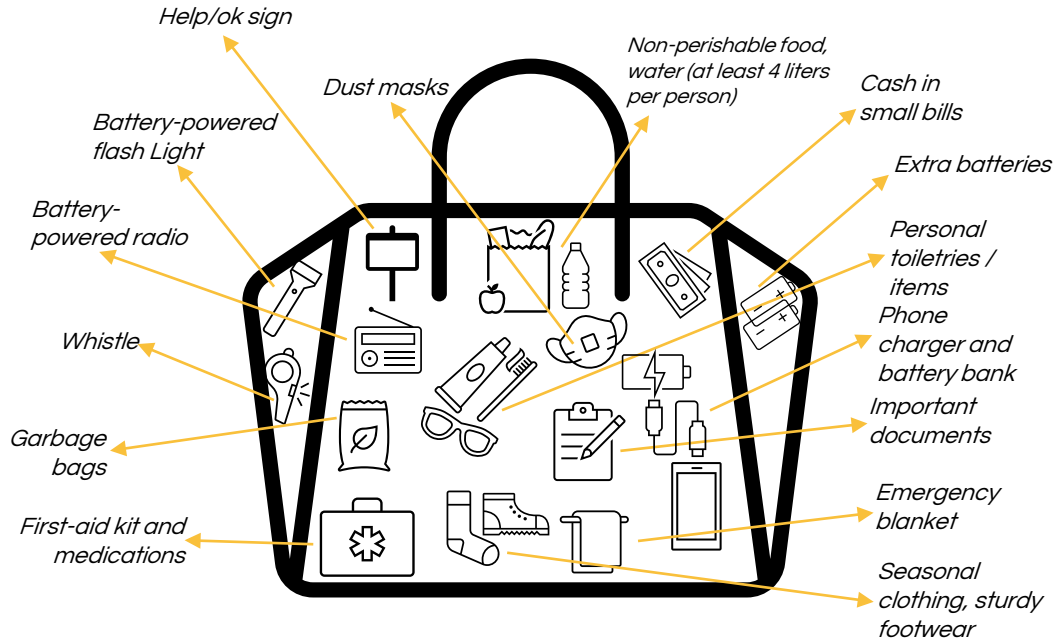
Make an Emergency Plan:

An Emergency Plan allows you to know what steps to take during flooding. Find it on "[PreparedBC](#)" website.

Preparing for your own Safety

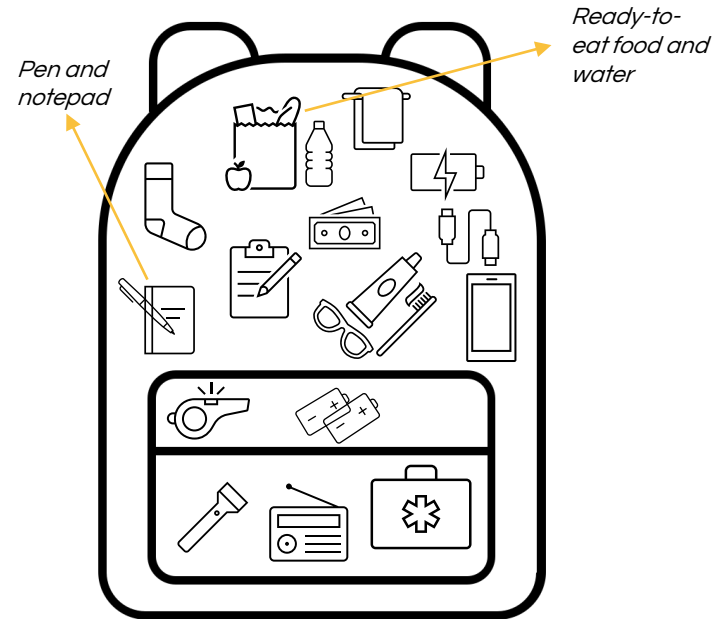
Should I stay?

Emergency Kit



Should I go?

Grab-and-Go Bag



Preparing for your community

No one left behind:



How well do you know your neighbors?
During an emergency, support is important.
Build relationships now!



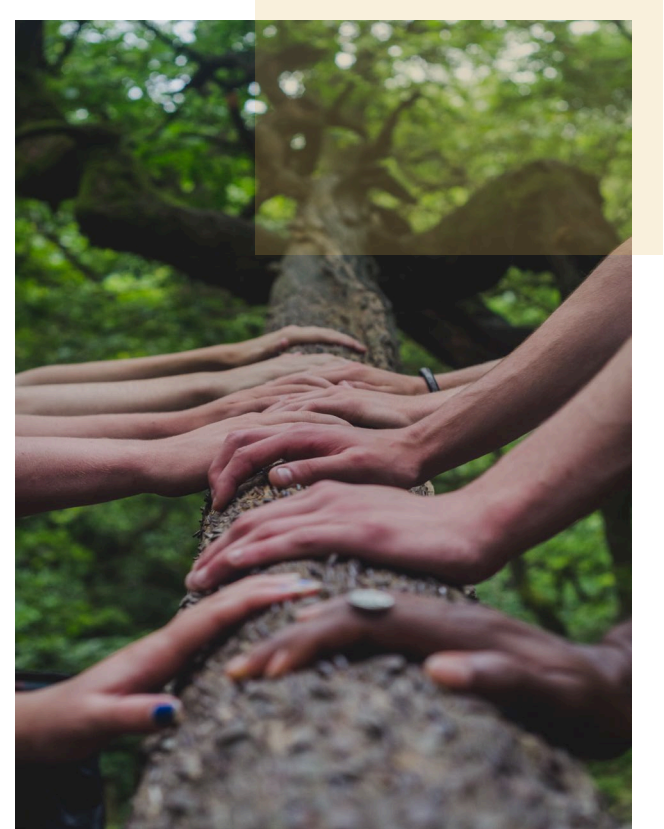
Elders and other vulnerable individuals. Do you
know members of the community that might not
be prepared for flooding? Help them prepare!



Attend other flood preparedness events when
offered by the city, and invite your friends and
family to do the same!




Do you want to help your community during an
emergency? Sign up to volunteer at
Emergency Support Services (ESS)!



BRAINSTORMING REVEAL





What measures can you adopt to *prepare* for flooding?

Insurance

Emergency kit

Prepare emergency kits

Ensure positive drainage away from home

Everbridge

Make a grab-and-go bag

Watch for alerts

Preparing an emergency kit

Education



Image credit:
City of Dawson Creek

Personal Flood Preparedness

During the Flood



Imminent Flooding

- Stay updated through City website
- Notify loved ones, friends, neighbours
- Follow recommended driving routes
- Limit toilet flushing and washing

Flood Advisories and Warnings



High Streamflow Advisory



Flood Watch



Flood Warning

Website:
River
Forecast
Centre

Evacuation Stages

Evacuation Alert

Prepare to leave

- Gather emergency bags and plans
- Shut off electricity to flood-risk areas
- Move household items and vehicles to flood-safe areas



Evacuation Order

Leave immediately

- Follow all directions from officials
- Do not cross rivers, streams, flooded roads



Evacuation Rescind

Return home

- follow "After the Flood" steps



Evacuation Stages

Evacuation Alert

Evacuation Order

Evacuation Rescind

Stay updated on City Website or dial #311





Manage Stress

- Take care
- Reach out
- Help others

Truth or lie?

Test your knowledge!

*Open Mentimeter and try to guess
whether the statements you see
are true or false!*





Truth or Lie



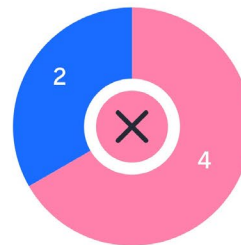
Evacuation Rescind
means that the
evacuation order is
coming back into
effect.

Truth or Lie



A "Flood Warning" is more serious than a "Flood Watch" advisory.

Truth or Lie



You should limit using your washing machine during times of flood risk because the water may be contaminated.



Truth or Lie



30 cm of rushing
water can sweep
away a vehicle.



Image credit:
City of Dawson Creek

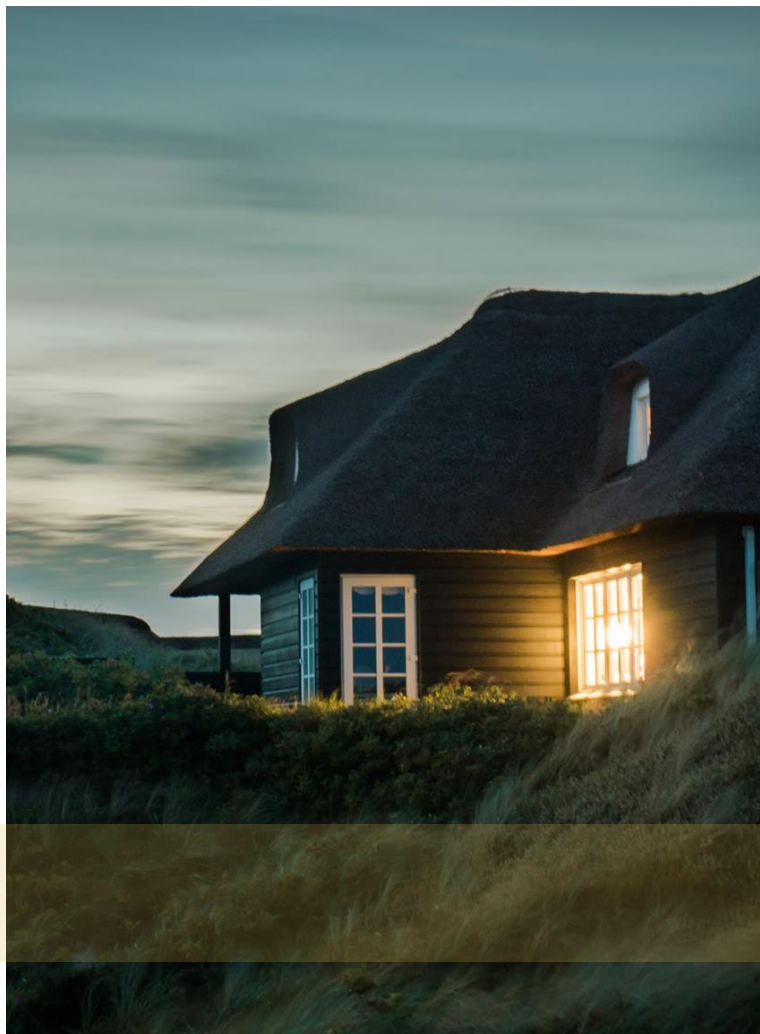
Personal Flood Preparedness

After the flood



After the Flood

- Make an insurance claim
- Visit the City's website for Recovery information
- Psychological care
- Reach out to friends, loved ones and neighbours



Returning Home

- Take caution
- Clean your home
- Manage mould and other health risks

Sharing Feedback

Scan the QR code to complete a short survey



Create your own flood preparedness checklist

Select 3 actions that you commit to doing to prepare for floods following today's workshop.

You can select them from the checklist or add your own.

Flood Preparedness Checklist

PREPAREDNESS FOR YOUR HOME

- ☐ Learn more about my insurance options
- ☐ Clear gutters and storm drains regularly
- ☐ Place valuable items on higher shelves
- ☐ Raise appliances and electrical sockets
- ☐ Install a sump pump
- ☐ Install flood-resistant door or drywall

YOU AND YOUR COMMUNITY

- ☐ Sign up for the alert system
- ☐ Make an emergency Plan
- ☐ Make a grab-and-go bag
- ☐ Help others prepare for flooding
- ☐ Go to other flood preparedness events
- ☐ Sign up to volunteer

Sharing Feedback

Understanding
what went right

Is there anything you
particularly enjoyed during
this workshop?

Understanding
what went wrong

What could be
improved?

Future
Engagement

What would you like to see
in future workshops?



Thank You!



Do you have any further questions or concerns on flood preparedness? Contact Chelsea Mottishaw at cmottishaw@dawsoncreek.ca

Do you have any further questions for the scholars? Contact Maddi, Margo or Giulia at madelaineparent@gmail.com, mpustova@student.ubc.ca, and gbelotti@student.ubc.ca.



Citations

British Columbia Government EBook Collection, & Emergency Management BC. (2018). *Flood preparedness guide*. PreparedBC.

British Columbia Government. (2022). Flood advisories and warnings. River Forecast Centre. <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/drought-flooding-dikes-dams/river-forecast-centre>

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SHIFT Collaborative. (2019). Northeast Climate Change Vulnerability Assessments. Final report. Dawson Creek. [Dawson_Creek_Community_Vulnerability_Assessment.pdf \(fraserbasin.bc.ca\)](#)

