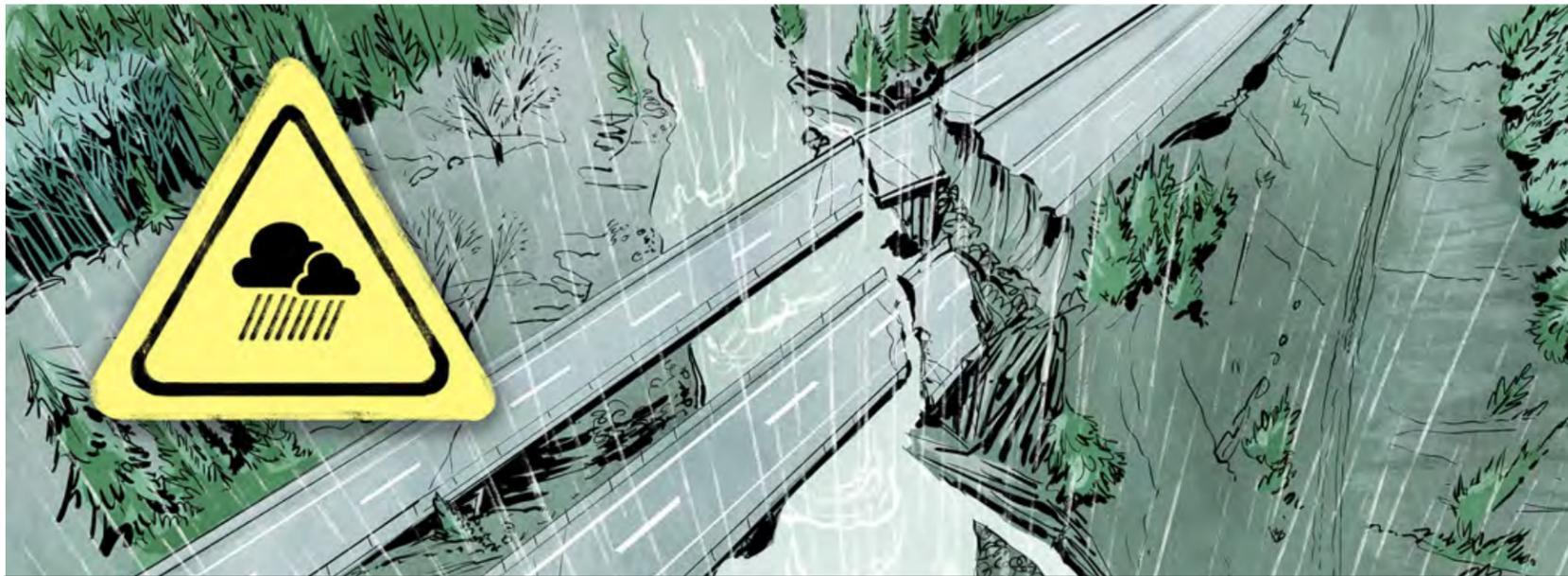


NATIONAL EPIC FLOODING BATTERS B.C.



Ceaseless, pounding sheets of rain **pummeled** southern British Columbia between November 13 and 15. The storm dropped more **precipitation** in 48 hours than parts of the region normally experience over the entire month. At least 20 rainfall records were broken.

The deluge flooded entire towns. It laid waste to roads, highways, and railway lines. Mudslides swallowed parts of Highway 99 near the town of Lillooet. At least four people died in the disaster.

Two more mudslides along Highway 7 trapped nearly 300 motorists. They were stuck between the towns of Agassiz and Hope for hours. They had to shelter in their vehicles overnight. Then, Canadian

military helicopters airlifted them out of danger.

As the storm went on, mudslides and flooding cut all the major roads between the Lower Mainland and the B.C. Interior.

MASS EVACUATIONS

At the peak of the crisis, 40 highways were closed. Nearly 18,000 people were ordered to leave their homes. That included all 7000 residents of the town of Merritt. They had to **evacuate** after the nearby Coldwater River burst its banks. It engulfed the entire water distribution network and the wastewater treatment plant.

By late November, Merritt residents were allowed to return to their homes in stages. However, a boil water advisory remained in effect.

'WE LOST EVERYTHING'

Mario Loutef of Princeton witnessed the impact of the flood firsthand. It took out a large portion of his town after the Tulameen River overflowed.

“It was like a **tsunami** because it filled up the little streets,” he said. “But once those were taken care of that’s when the water took care of my space and everybody else on the road.”

“We lost everything. I don’t know where to start. I don’t know where it will end.”

A FARMING CALAMITY

Those living around Abbotsford and Chilliwack in the Fraser Valley were especially hard hit. Abbotsford ordered evacuations after dikes failed and a swath of the Sumas Prairie flooded.

DEFINITIONS

EVACUATE: to remove someone from a dangerous place

PRECIPITATION: water that falls as rain, snow, etc.

PUMMEL: to repeatedly hit or punch someone or something very hard

TSUNAMI: a very high, large wave in the ocean that is usually caused by an earthquake under the sea and that can cause great destruction when it reaches land



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The 1200 farms that dot the region boast some of Canada's most diverse agriculture. Usually, the area supplies half the dairy, eggs, and poultry that British Columbians consume. But flooding badly damaged the farmland and its infrastructure. Hundreds of thousands of poultry and other farm animals, died, too. So production dropped sharply.

SHORTAGES AND PANIC

Rail and highway closures were another problem. They severely affected regional and global **supply chains**. Trains and trucks couldn't move goods throughout the province. There were temporary shortages of some products, including gasoline. Panicked consumers lined up for hours to fill their tanks. They stripped many stores of chicken, beef, and other goods.

Meanwhile, closed roads and railways limited access to the port of Vancouver. The port is the largest in Canada. It is the fourth-busiest in North America. It connects western Canada to 170 other trading partners around the world. It's where **exports** such as grain and potash start their journey to Asia. And it's the destination of

consumer goods that Canadians **import** from overseas. In all, the port handles some 3.4 million containers a year. The total of all goods moving through it is valued at \$240 billion.

THE ROAD TO RECOVERY

The provincial and federal governments acted immediately to assist affected residents. On November 17, B.C. Premier John Horgan declared a state of emergency. He wanted to help the government get roads and railways back in operation quickly. B.C. declared it would give financial aid to people without insurance to cover losses caused by the floods. It is also working with the Red Cross to offer \$2000 to those most affected and in need.

For its part, Ottawa sent 12 military aircraft and 500 soldiers to B.C. They are bringing people to safety, restoring supply chains, and protecting infrastructure. Ottawa also pledged \$4.4 million to help affected Indigenous communities.

"It's not... enough for us to be here now. We need to be there for each other in the coming months and years," said Prime Minister Justin Trudeau.

A RIVER IN THE SKY

The flooding that devastated British Columbia in November was caused by an atmospheric river. Atmospheric rivers are huge currents that carry water vapour through the sky. They're about 400 to 600 kilometres wide and can stretch over 1600 kilometres. They flow in the direction of moving air created by weather systems.

These rivers form by absorbing water vapour from the warm, moist air rising off tropical regions. When the rivers hit cooler areas, they drop the water as rain or snow. Just a few atmospheric river events can account for half of the annual precipitation on the West Coast.

Atmospheric rivers deliver an important source of fresh water. However, when they park over a region for days, flooding, mudslides, and other disasters can happen, as B.C. learned all too well.

He visited B.C. on November 26 and praised communities for their resilience. He added that a new federal committee will manage B.C.'s recovery. It will also help shape the government's response to future extreme events and to climate change in general. ★

DEFINITIONS

EXPORT: products sent to another country to be sold

IMPORT: to bring a product into a country to be sold

SUPPLY CHAIN: the system of people and things that are

involved in getting a product from the place where it is made to the person who buys it



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COMPREHENSION QUESTIONS

1. A huge current that carries water vapour through the sky is called an:

2. How large are these weather systems?

3. How do these weather systems form? Explain.

4. Which B.C. region was hit by a major storm in mid-November? How much rain did this system drop?

5. Describe how did the storm affected the city of Merritt.

6. How important is the agriculture industry in the Fraser Valley? Explain.

7. How did the flooding affect this region? Explain

8. What is a **supply chain**?

9. How did the flooding affect regional supply chains? Explain.

10. How was the Port of Vancouver affected? How important is this facility?



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QUESTIONS FOR FURTHER THOUGHT

1. Humanitarian organizations such as the Red Cross provide relief for victims of disasters such as the B.C. floods. What types of support might victims need during and after such an event? Explain.

2. This has been a particularly difficult year for the residents of British Columbia. In May, hundreds of unmarked graves were discovered at a former Residential School in Kamloops, B.C. The province had just begun to see some positive progress with COVID-19 rates when it was hit with deadly heat waves, devastating wildfires, and a tornado this past summer. Now, B.C. is dealing with the aftermath of these cataclysmic floods.

If you could send a message of strength to a resident of British Columbia right now, what would you say? Explain.

3. Consider Prime Minister Justin Trudeau's comments after touring the flood-ravaged Lower Mainland in B.C.: "It's not going to be enough for us to be there now and in the coming weeks – we need to be there for each other in the coming months and coming years."

What is your understanding of this quote? Respond to this quote. What feelings does it evoke? What thoughts does it provoke? As you see it, what is the significance of the prime minister's words? Explain.



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QUESTIONS FOR ONLINE EXPLORATION

Note: The links below are listed at www.lesplan.com/en/links for easy access.

1. Get a sense of the impact of this flood from these photos, videos, and overhead news reports:

<https://newsinteractives.cbc.ca/longform/bc-flooding-2021-timeline-how-once-in-a-century-flooding-unfolded>

<https://www.cbc.ca/news/canada/british-columbia/bc-floods-sumas-prairie-before-after-images-1.6258803>

<https://www.cbc.ca/news/canada/british-columbia/hundreds-rescued-from-floodwaters-as-b-c-declares-state-of-emergency-1.6252421>

<https://www.cbc.ca/player/play/1975224899535> [0:55]

Which image resonated with you the most? Give details to support your response.

2. Find out more about atmospheric rivers and how devastating their impact can be:

https://i.cbc.ca/1.6254648.1637276737!/fileImage/httpImage/image.jpg_gen/derivatives/original_1180/info-graphic-what-are-atmospheric-rivers.jpg

<https://www.cbc.ca/player/play/1798456899853/> [2:10]

What did you learn about this weather phenomenon? Explain.

3. Learn more about how communities are supporting evacuees and others stranded by the floods:

<https://www.cbc.ca/player/play/1976488515989> [5:47]

<https://www.cbc.ca/player/play/1975708227672> [1:59]

<https://www.youtube.com/watch?v=z7PbLv9Dy14> [1:54]

Share your impressions with a peer after viewing these stories.



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Imagining a Before and After: Draw (or write) about what you imagine happened right before this scene and what is likely to happen next. A **plausible prediction** builds on details in the photograph, explains the context (why the event happened), is believable, and includes all 5Ws. A **likely conclusion** builds on details in the photograph, is logical and believable, and includes all 5Ws.

Before



Damage caused by heavy rains and mudslides along the Coquihalla Highway near Hope, B.C., on November 18, 2021. THE CANADIAN PRESS/Jonathan Hayward)

After



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PUTTING IT ALL TOGETHER

A. Write the letter that corresponds to the best answer on the line beside each question:

_____ 1. What weather phenomenon recently caused severe flooding in southern B.C.?

- a) an earthquake
- b) a hurricane
- c) a king tide
- d) an atmospheric river

_____ 2. Which region supplies much of the dairy, eggs, and poultry consumed in B.C.?

- a) Vancouver Island
- b) the Cariboo
- c) the Fraser Valley
- d) the Thompson-Okanagan

_____ 3. Which B.C. community was totally evacuated due to the recent flooding?

- a) Merritt
- b) Princeton
- c) Vancouver
- d) Abbotsford

B. Mark the statements T (True) or F (False). If a statement is True, write one important fact to support it on the line below. If a statement is False, write the words that make it true on the line below.

_____ 4. **True or False?** Stranded travellers between Agassiz and Hope were rescued by U.S. Coast Guard helicopters.

_____ 5. **True or False?** Large parts of the Sumas Prairie near Abbotsford flooded after dikes failed.

_____ 6. **True or False?** Vancouver is the largest port in Canada.

C. Fill in the blanks to complete each sentence.

7. Ottawa sent _____ soldiers to B.C. to help flood victims.

8. The B.C. government declared a state of _____ .

9. Many rail and highway closures in B.C. severely disrupted regional and global

_____ chains.

D. Respond to the following question in paragraph form. *(Use a separate sheet of paper if necessary.)*

10. As you see it, what is the significance of this story? Give reasons to support your response.

