Coquitlam

FACT SHEET

Updated: October 24, 2024

Atmospheric River Event – October 2024

On October 19 and 20, Metro Vancouver experienced its first atmospheric river event of the season. Many areas across the region saw record-breaking rainfall, which led to hazardous conditions, including flooding, road and park closures, and landslides.

The October 2024 storm event has been characterized as greater than a 1:100 year event that brought over 250 mm of rainfall to areas of Coquitlam over a 24-hour period. Local impacts of this event significantly exceeded the catastrophic atmospheric river event in November 2021, which also led to significant flooding in Coquitlam following 97 mm of rainfall in a 24-hour period.

Prior to the event and over the course of the storm, the City of Coquitlam issued a number of public safety updates via social media and website updates, including:

- **Wednesday, Oct. 16, 2024 – Information Bulletin: Become a Steward for Your Community By Adopting a Catch Basin –** Coquitlam residents and business are encouraged to adopt a catch basin, helping protect local streams and water habitats, and preventing flooding in their community. [Read More]
- **Friday, Oct. 18, 2024 – PSA: Be Prepared: Heavy Rain and Wind Coming Our Way** – Coquitlam residents are encouraged to take precautions as Environment Canada has issued a rainfall warning, with 40-70 mm of rain expected over the weekend. Strong winds are also expected on Saturday. [Read More]
- **Saturday, Oct. 19, 2024 – PSA: City Crews Take Action to Manage Storm Impacts in Coquitlam** - City crews are working around the clock to manage the effects of a storm that began late Friday afternoon, bringing significant rainfall across the city. [Read More]
- **Monday, Oct. 21, 2024 – Public Statement: Council Acknowledgement of Atmospheric River Event and Impacts on Coquitlam** (includes video link) [Read More]

City crews will continue to assess the impacts of the storm, including ongoing repairs and restoration of roads, trails, and parks, and inspecting local ravines. In addition, as part of our commitment to continuous improvement, City staff conducted a debrief of the emergency response. While Coquitlam's proactive measures and preparedness helped mitigate many potential impacts, these sessions allow us to reflect on the actions taken and identify any enhancements to further strengthen our resilience in future extreme weather events. The debrief process ensured we continue to learn from each event while remaining sensitive to the gravity of incidents like this one, where we tragically lost a member of our community.

Quick Facts

- Environment Canada originally issued a rainfall warning, predicting 40-70 mm of rain in our region. By Friday, they increased their forecast to 100-150 mm. Ultimately, the impact was far greater than predicted with parts of Coquitlam receiving close to 300 mm by the end of the weekend.
- Between Friday, October 18 and Sunday, October 20, Coquitlam used social media to increase public and media awareness of the storm. The City shared six updates posted across three social media platforms (Facebook, Instagram, X) that received 91,235 impressions (people who saw the post) and 10,241 engagements (People who liked, shared, saved or comment on the post).
- During the storm event, the City provided 24/7 customer service response and recorded:
    - Over 300 calls and 140 service requests to Engineering and Public Works.
    - Twenty calls for Parks services, mostly related to tree impacts.
    - Coquitlam Fire/Rescue attendance to over 80 incidents – almost double the usual weekend volume.
- Coquitlam deployed additional staff and equipment to help manage the storm event, including:
    - Additional Utility Control Centre customer service staff to manage increased call volumes.
    - A team of 25 to 40 Public Works staff who worked across various shifts throughout the weekend to respond to issues.
    - At the peak of the event, 35 members of Coquitlam Fire/Rescue, augmented by 20 members of the Canada Task Force 1 Heavy Urban Search and Rescue team.
    - Over 30 vehicles and specialized equipment, including backhoes, loaders and seven vacuum trucks, working continuously around the clock.
- Coquitlam fronts four major rivers: Brunette, Coquitlam, Pitt and Fraser River, and has over 300+ km of creeks within its boundaries.
- Every year, Coquitlam's proactive maintenance measures include removing up to 20,000 tonnes of sediment from local creeks to enhance water flow.
- Coquitlam has 11 water pump stations, 26 sanitary pump stations, 23 grinder (small sanitary) stations and 5 drainage pump stations, which are regularly assessed by City staff and formally inspected by an external consultant every five years.
- Coquitlam regularly inspects, repairs and replaces the City's sewer system assets, however over 50% of the sewer system is on private property and is the responsibility of the property owner.

Preventative and Mitigation Measures

- **Proactive Preparations:** In advance of all major weather events, City staff receive and review advanced weather reports to guide preparation and inform response activities.
- **Pre-Storm Measures:** In the days leading up to October 2024 storm, City crews inspected pump stations and critical catch basins, culverts, intakes and ditches to ensure they were clear and in good condition. They also swept and cleared debris from roadways, and cleared vegetation and sediment out of watercourses to increase capacity for water intake. The City also proactively scheduled work crews to ensure resources and timely response to emerging situations as needed.

- **24/7 Coverage:** During the storm, Public Works crews operated on rotating 24-hour shifts to ensure continuous coverage and emergency response.
- **Increased System Capacity:** Diversion sewers redirect flows from smaller pipe systems to larger systems. Detention ponds, rain gardens, and infiltration galleries help prevent more severe flooding during heavy rain and let more water soak into the ground to refill natural water sources.
- **Data-Informed Actions:** Coquitlam uses live and historical data from flow monitors and rain gauges to monitor overall system performance and inform planning. Detailed computer models have been developed to predict system performance during storm events, using real data to verify accuracy.
- **Backup Support:** Generators and backup pumps are included at pump stations to improve resilience and capacity for peak events.

Proactive and Ongoing Measures

- **Climate Action Plan**: Currently under development, this plan will provide roadmap to further advance the City's climate mitigation (i.e. efforts to reduce greenhouse gas emissions) and climate adaptation (i.e. actions to adapt services and infrastructure to changing climate conditions). (coquitlam.ca/ClimateAction)
- **Climate Adaptation Strategic Plan:** Adopted in 2020, Coquitlam's plan evaluates potential risks climate change poses to civic services, infrastructure and residents, and sets out short- term and long-term actions to address them. To date this has included updating storm sewer design criteria, implementing new measures to ensure new developments manage rainwater in a way that protects watersheds, ongoing flood preparation work, including advancing the Lower Mainland Flood Management Strategy in collaboration with the Fraser Basin Council and other municipalities. (coquitlam.ca/ClimateAction)
- **Design Measures:** The City has planned for future storms by using climate change data to model how more intense and frequent events might affect the City's infrastructure. This information has been used to adjust the size of pipes in the City's water, sanitary and drainage system so that they can better handle these changes.
- **Environmental Sustainability Plan:** Finalized in 2022, this plan aims to support long-term community resiliency and sustainability through actions in the areas of Climate Action, Water Management, and Natural Areas, Wildlife and Habitat. (coquitlam.ca/ESP)
- **Flood Preparedness and Response Plan**: Every year, Coquitlam City staff prepare for the possibility of flooding, including updating the City's Flood Plan, practicing repair and mitigation measures, and training personnel. Learn more at coquitlam.ca/Flooding
- **Floodplain Mapping:** Coquitlam fronts four major rivers and has three major floodplain areas: Coquitlam River floodplain, Fraser River floodplain and Pitt River floodplain. The City has established floodplain standards to educate property owners on flooding risks and set standards for new developments.
- **Good Neighbour Development Policy:** Requires management and maintenance of construction sites to protect and enhance the health of the natural environment and reduce the impacts of excavation, tree or vegetation removal, and damage to retaining walls. (coquitlam.ca/GoodNeighbour)

- **Hazard, Risk and Vulnerability Analysis Project:** Approved in 2023, this project is actively identifying and prioritizing hazards specific to Coquitlam, including those related to climate change. This work will guide future risk-reduction efforts, further strengthening the City's resilience to extreme weather events.
- **Integrated Watershed Management Plans:** To address watershed health and model stormwater conveyance, the City has incorporated policies that require developments to reduce stormwater runoff through detention, infiltration, and green infrastructure. Learn more at coquitlam.ca/IWMP, which includes an online map tour of Coquitlam's watersheds.
- **Slope Safety:** Given Coquitlam's topography, which includes many natural watercourses, slopes and ravines, the City has implemented many measures to reduce the risk of landslides and increase slope safety. This includes Slope Hazard Regulations, which require thorough assessments for new developments, and updates to the City's Stream and Drainage System Protection Bylaw, which requires requires construction sites to develop contingency and mitigation plans to protect the downstream environment and infrastructure during extreme weather events. The City also undertakes annual ravine inspections to proactively manage risks in these areas. Learn more at coquitlam.ca/SteepSlopes.
- **Seasonal and ongoing public education campaigns**:
    - ***Adopt-A-Catch Basin Program*** (coquitlam.ca/AdoptaCatchBasin)
    - ***Emergency Preparedness*** (coquitlam.ca/ep)
    - ***Seasonal Unlimited Yard Trimming program*** (coquitlam.ca/SUYT)
    - ***WinterWise*** (coquitlam.ca/WinterWise)

Tips to Help Reduce Risk of Flooding

Localized flooding can happen when drain pipes become blocked by tree roots or debris. Residents can help prevent flooding by:

- Adopting a catch basin – visit coquitlam.ca/AdoptaCatchBasin to view Coquitlam's catch basins map.
- Clearing gutters and catch basins of leaves and debris.
- Raking up leaves and debris to prevent them from plugging drains.
- Cleaning foundation drains and sumps to help prevent storm sewer pipes from becoming blocked by leaves, dirt, roots or debris.
- Clearing ditches and culverts to prevent items such as toys, balls and from getting lodged in the culverts and causing water to back up.
- Repairing broken or damaged pipes, and checking that your home drainage system is working properly.
- Collecting leaves, rather than blowing onto City streets, which can increase flooding risk by blocking catch basins.
- Reporting emergency City drainage problems to 604-927-3500 or by completing our Online Service Request form, which are both available and monitored 24 hours a day.