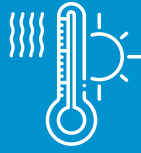


How will climate change affect Nanaimo?



Nanaimo is already feeling the effects of climate change: from warmer annual temperatures to an increase in the number of severe weather events. This guide explains the impacts of climate change and challenges Nanaimo will face in the future.

What is the City doing to prepare?

The City of Nanaimo is undertaking several climate adaptation initiatives, including:

- Developing a strategy to support energy-efficient buildings that will better withstand extreme temperature fluctuations
- Created new Development Permit Areas to guide and protect new development from future climate hazards such as sea level rise and wildfires
- Identifying those most at risk from extreme weather events through mapping, assessment, and planning

Visit nanaimo.ca/green-initiatives to read about more adaptation measures.

What you can do to prepare for climate impacts

Here are several actions you can take to prepare for some of the impacts of climate change:

- Install a heat pump to provide cooling during the summer and more energy efficient heating
- Purchase black out curtains to shade windows during high temperature days
- Check on friends and neighbours during extreme weather events
- If you live along the ocean, keep buildings and development away from the shoreline and protect the shoreline using Green Shores strategies
- Increase permeable surfaces on your property to help absorb and slow the flow of storm water
- Conserve water, let your lawn go brown in the summer, and plant native drought and fire tolerant species
- Protect your home from wildfire, following tips from firesmartbc.ca

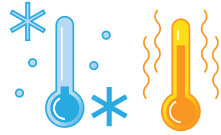


PREPARING FOR CLIMATE CHANGE IN NANAIMO



Climate Impacts

Changes in Temperature



Going forward, Nanaimo can expect warmer temperatures across all seasons.

The number of days above 25°C in a year are expected to double by the 2050s.

The hottest daytime temperature in the summer will increase to ~35°C by the 2050s.

Winter days and nights are going to get warmer, with frost-free days and growing season length both increasing significantly.

Changes in Precipitation



Nanaimo is expected to see more rainy days in every season except for summer. Rainfall and storm events will become more intense, with increased amounts of precipitation on rainy days.

Summer months, on the other hand, will experience longer and more frequent dry spells (days without rain).

Snowfall during the winter and spring will decrease 60% by 2050 and almost 80% by 2080.

Increase in Frequency & Severity of Extreme Events



Expecting the unexpected will become the norm in Nanaimo, with more extreme weather anticipated over time.

Increased temperatures and summer drought will cause wildfire risk to grow between 1.5–2 times by 2050, and up to 2.5 times by 2080.

More frequent and intense wind and rain events will occur.

Impacts

Ecosystems: Prolonged heat and drought will change species' natural ranges, increase opportunities for invasive species, and add stress to natural systems.

Human health: Increases in heat-related illness and smoke from wildfires, and increased pressure on our water supply during long, dry, hot summers

Heating and Cooling demand: Demand for air-conditioning will almost double by the 2050s, while the demand for heating will decrease during the fall to spring months.

Sea Level Rise



As an oceanside city, Nanaimo is particularly vulnerable to sea level rise. It is expected that our sea levels will rise by 0.5 metres by 2050.

Impacts

Coastal Flooding: Damage to buildings and infrastructure can occur, potentially causing interruption of services and cultural sites.

Increased Shoreline Erosion: Vulnerable slopes will be affected by shoreline erosion.

Impacts

Health Impacts: Smoke from wildfires will increase, causing physical and mental health impacts, especially for vulnerable populations.

Utilities and Services: Power outages, water service, or other infrastructure such as communication networks.

Damage: Worsened damage to the natural and built environment from storms.

Increased Costs: Emergency responders and resources will need to be activated more frequently.