



The Columbia Icefields are a local example of melting glaciers.

Start Thinking About Local Impacts

The expected impacts of climate change will influence a range of sectors and activities. A handful of expected impacts of climate change are summarized below.

Water Supply

- Higher temperatures and less summer precipitation may lead to more prolonged and intense droughts.
- Higher winter stream flows and severe rain events may cause flooding.
- Recharge rates for groundwater sources could change.
- Lower stream flows at the end of summer may impact surface water users.

Ground Transportation

- Higher winter stream flows and extreme precipitation events could increase the risk of more frequent or severe floods and landslides which may damage roads and railways.
- Warmer winters may mean reduced snow removal.
- Mid-winter thaws could damage roads and rail lines, and cause ice jams or flooding.
- Increased temperatures could change snowpack stability and alter the prediction and occurrence of avalanches.

Community Infrastructure & Safety

- Municipal water systems could be impacted by droughts or floods.
- Storm water systems may be overwhelmed by storm events and the intensity of precipitation.
- Increased temperatures and drier climates could lead to an increase in wildfires that threaten communities.

Public Health

- People with sensitivity to heat may find it difficult to cope with increasing temperatures in the summer.
- Smoke from wildfires may reduce the air quality.
- Warmer temperatures may trigger changes in water or food-borne diseases.

Impacts are either direct or indirect effects of a changing climate on natural, human or built systems.

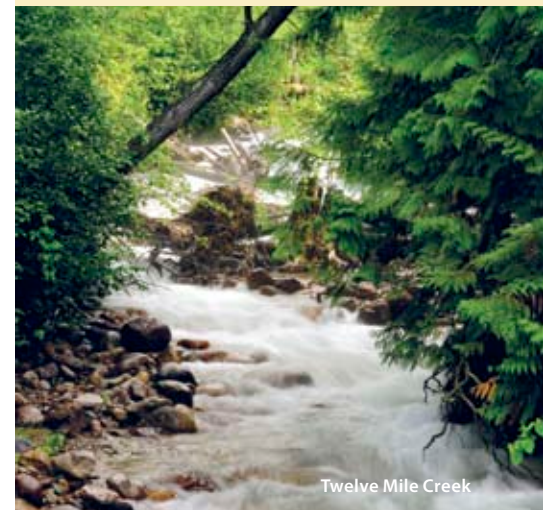
Hydro-electric Power

- Changing stream flow patterns may reduce hydro production, especially in the summer and fall when demand is usually highest.
- It may be more difficult to maintain current reservoir and flow levels to meet non-power needs.

What to Expect

Temperature and precipitation changes in the Columbia Basin mean what we have seen in the past is not what we will see in the future. In fact, we are already seeing some changes. The current science and climate modeling suggests we can expect:

1. Higher summer temperatures
2. Warmer winters
3. A decline in low-elevation snowpack
4. Receding glaciers
5. Earlier and larger spring freshet (snowmelt)
6. Lower water levels in streams in summer for longer periods
7. Higher water levels in streams in winter
8. Reduced soil moisture
9. More extreme weather events
10. Increased variability in weather



Twelve Mile Creek

Forestry

- Warmer temperatures may influence which tree species grow in the Basin.
- Warmer winters may shorten the winter logging season.
- Warmer temperatures may change insect and disease distribution and overall forest health.
- Longer and warmer dry seasons may create larger, higher-intensity wildfires.

Tourism & Recreation

- Warmer winters may result in less low-elevation snowfall, lower snowpacks, and earlier snowmelt, which may mean reduced skiing seasons.
- Floods and high stream flows could damage fish habitat.
- Warmer winters may create shallow ice cover on some lakes, making ice fishing and other activities unsafe.
- Wildfire may limit access to the backcountry and change recreational experiences by degrading views and wildlife habitat.

Many communities in the Columbia Basin rely on forestry, recreation, tourism and other sectors to support their local economies.

Think about the chain reactions caused by changes in temperature and precipitation.

Agriculture

- Less summer precipitation and warmer temperatures may reduce soil moisture and increase irrigation needs.
- Warmer temperatures may improve the potential for some high-value crops.
- Warmer temperatures may mean a longer growing season.

For more detailed information see *Climate Change in the Canadian Columbia Basin: Starting the Dialogue* @ www.cbt.org/climatechange.

What can you do?

1. Accept that the present is, and the future will be, different from the past, and continue to learn more about the expected changes.
2. Expect surprises and be as prepared as possible.
3. Factor in climate change for long-term decisions.
4. Check out CBT's 10 ideas for taking action on climate change today at www.cbt.org/climatechange/reducingemissions.

Learn More

CBT is committed to working with residents of the Columbia Basin to help them understand issues that matter to them; one of these issues is climate change. CBT is taking the lead and working with a range of partners to:

- Increase Basin residents' awareness of local climate change impacts.
- Provide credible, science-based information on expected local changes in temperature and precipitation.
- Support local governments, municipalities and First Nations to reduce their emissions through a multi-year mitigation effort.

One of CBT's climate change initiatives, Communities Adapting to Climate Change, supports communities in the Columbia Basin to increase their adaptive capacity and resiliency to climate change impacts at a community level.

For more relevant and local information about CBT-supported climate change initiatives visit www.cbt.org/climatechange.