



# Northern Climate Exchange WhiteCAP Project

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## Building Adaptive Capacity in Whitehorse

### Sustainability and Climate Change

How do the goal of sustainability and the challenge of climate change interrelate? We know that the major cause of climate change is the emission of greenhouse gases, so as we make our energy sources more sustainable (e.g. conservation, efficiency, renewables, etc.) we also make our lives more sustainable.

When we reduce our greenhouse gas emissions, we make our climate more sustainable as well. However, the response will be slow on a human time scale. The climate takes time to warm up and it will take even more time to stabilize. As a result we know that the climate change impacts we are starting to experience will increase in the coming years. Where the impacts are negative, we will need to adapt.

Adaptation to climate change is itself another piece of sustainability. Yet if we are smart about how we adapt, then it can contribute even more broadly to the sustainable development and well-being of the community. Here are some examples for Whitehorse where adaptation to climate change and sustainability intersect.

### Example 1 Storms

The City of Whitehorse storm sewer system consists of a number of smaller systems into which surface run-off is collected and drained to the Yukon River. Increased snow and more frequent and heavier spring storms are causing us to consider how to adapt and improve this infrastructure. The City of Whitehorse has begun designing for the new 100 year storm surges rather than the old 50 year surges.

At the same time, the city can eliminate the discharge of storm water into fish bearing areas of the Yukon River and streams. Going even further, land use planning can take into account natural systems/wetlands/green systems to reduce hard surface run-off and lessen the storm surge in the first place.

### Example 2 Forest Fire

Whitehorse is a city set in the boreal forest. Emergency Services recognizes that forest fire is a real potential threat to people and property. Because climate change is expected to bring a greater variation in precipitation patterns, we know that summers will be on average hotter and that sometimes they will be drier and windier. The risk of forest fire is projected to increase.

One way to adapt to this increased risk is to enhance the FireSmart program in strategic locations. If we harvest the FireSmart wood and use it as a fuel for heating, rather than burn it on sight, then it can displace fossil fuels for heating. In this way we can adapt to and mitigate climate change at the same time.



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## Example 3 Local Agriculture

Not all climate change impacts will be negative and we should seek out opportunities. One possibility is agriculture. In the community of Whitehorse this could include neighbourhood gardens, a community greenhouse and local farms. Enhancing the food we grow in the community is thus a type of adaptation.

At the same time, local agriculture makes us more sustainable. It diversifies our economy and can support our burgeoning farmer's market, has health benefits, reduces waste, increases community involvement, responsibility, education...

In short it reduces our reliance on food shipped to the territory and enhances our resilience as a community. A more resilient community is better equipped to deal with other negative impacts.

## WhiteCAP Background

The Whitehorse Community Climate Change Adaptation Project (WhiteCAP) is an initiative lead by the Northern Climate ExChange (NCE). The NCE is assisting three Yukon communities to develop Climate Change Adaptation Plans through funds from the Northern Strategy. Whitehorse is the second community in the Yukon to be part of this planning process. Dawson City began its adaptation project one year earlier.

The intent of the Community Climate Change Adaptation Project is to carry out climate change adaptation planning and implementation of pilot adaptation actions in three Yukon communities by 2012. A draft Adaptation Plan for Whitehorse will be completed by Winter 2009/2010 with implementation of select pieces of the plan anticipated to start in 2010.

This project will assist Whitehorse to:

- Assess challenges and opportunities from climate change,
- Develop a plan of action to respond to the challenges and capitalize on the benefits, and
- Implement pilot actions from the plan.

The community of Whitehorse will prepare for climate change, including variability and uncertainty, by building capacity, resilience and partnerships. Adaptation should be proactive and where practical enhance natural systems, climate change mitigation, and the development and well-being of the community.

## More Info

### John Streicker

Whitehorse Adaptation Coordinator  
335-0965  
jstreicker@yukoncollege.yk.ca

### Ryan Hennessey

Community Adaptation Project Manager  
668-8874  
rhennessey@yukoncollege.yk.ca



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