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**News and happenings from the
Winter Cities Institute**

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Greetings to members and friends of Winter Cities! With the approach of the summer solstice, Alaska is bathed in daylight, resulting in lush flowers, gardens and greenery. The air in Anchorage is scented with lilac and flowering trees. Alaskans may celebrate winter, but love the long days of summer; fishing, boating, camping, exploring and mountain adventures.

This update will provide an overview of the activities of the Institute, as well as information from members and friends. We welcome submissions of information about what is happening in your community, as well as questions, comments and ideas to make the Institute better. Send an email to: pcoleman@wintercities.com.



**Member Spotlight: Municipality of Wood Buffalo
Fort McMurray, Alberta, Canada**

Wood Buffalo “Big Spirit of the North”

Contributed by Sally Lockhart

Everything about Wood Buffalo is big. It is the biggest municipality by area – 68,454 square kilometers – in Canada. Formed in 1995, the municipality is best known for its vast boreal forest, its long historic rivers, its massive oil sand reserves and the Wood Buffalo National Park.

Nestled in a forest valley where the Athabasca and Clearwater rivers converge is Wood Buffalo’s largest urban centre, Fort McMurray. The city has a rich history dating back to its origin as a Hudson Bay Company trading post in 1870. Fort McMurray is 5 hours by car North East of Edmonton. Today Fort McMurray draws attention from around the world as the residential and commercial focal point of Canada’s massive oil sands industry.

In addition to Fort McMurray, the remainder of Wood Buffalo has nine small rural communities including Alberta’s oldest settled community which has had continued residence, Fort Chipewyan



which was established in 1778.

Evidence of Aboriginal culture inhabiting Wood Buffalo dates back more than 8,000 years. The Dene, the ancestors of today Chipewyan and Beaver people have occupied Wood Buffalo on a permanent basis for more than 3,000 years. More recently Wood Buffalo became the traditional home on the Metis people.

Wood Buffalo's population exceeds 133,000 residents and is the third largest community in Alberta. The region is a mosaic of diversity with people moving here from all corners of the globe, over 85% of the population having emigrated from elsewhere. The region is experiencing unprecedented growth at an average annual rate of 9% and has the highest per capita income in Canada. It is also one of the youngest regions with the average mean age being 31 years.

This unprecedented growth has brought with it many extraordinary pressures; infrastructure not keeping up with demand and major traffic congestion that you would find in a city ten times the size. The area is currently having some major road and bridge construction to improve traffic flow.

Another issue is a shortage of housing, although with the current global economic slowdown, supply is temporarily catching up with demand. The most difficult challenge is a shortage of human resources to work in the area; the unemployment rate in the region is at 3%. The rapid growth has placed pressure on all aspects of the region.

There is great community spirit and pride in the region. Wood Buffalo is a very giving community and has a strong sense of community. There are a number of large community recreation facilities including the new MacDonald Island complex, one of the largest facilities in Western Canada. The extensive trail system that continues to expand connecting new housing developments to one of Wood Buffalo's crown jewels named the Birchwood trail system, which has an extensive outdoor green gym. The region has excellent neighborhood park and playground systems contributing to one of the most enjoyable aspects of living in Wood Buffalo not to mention the great outdoor openness of the area. There are three spectacular golf courses that one shares with nature and the Athabasca River.

In the winter Wood Buffalo comes alive with the many community and individual activities. There is endless opportunities to take advantage of the great outdoors, the transformation of the walking trails into an extensive cross country ski system that is maintained by the local Ptarmigan Nordic Ski Club (a municipal partner). Outdoor skating rinks and sledding hills dot the municipality. Wood Buffalo has an extensive snowmobile trail network that is maintained by the Sno-drifters snow mobile club (a municipal partner) with over 200 km of groomed trail systems connecting a number of the communities in Wood Buffalo. Vista Ridge ski hill is the region's ski, snowboarding and tubing facility. Another unique opportunity of the winter is to travel North on the ice road to the Northern end of the region known as Fort Chipewyan which includes Wood Buffalo

“There is a quality of life here that goes beyond the economic benefits”

**Sally Lockhart
Municipality of
Wood Buffalo**



New bridge construction will help relieve traffic congestion in Fort McMurray



The Shoot Out on the Syne pond hockey tournament is the largest in western Canada

National Park.

The region is very event focused and has numerous events throughout the year from Shoot out on the Syne, pond hockey tournament, to big name concerts, the celebrations of the area's heritage with treaty days and Canada Day to the celebration of winter with a 10 day Winter Carnival to be introduced in 2011.

One of the most breathtaking things to see during winter are the Northern Lights or Aurora Borealis. This is Mother Nature's ballet, and is best seen in the late fall or winter months when the dancing blue, green and red lights paint the night sky and astound visitors and residents alike, with her surreal beauty.

Residents of the Wood Buffalo region have been known to say that one of the most unique and engaging qualities of this area is its community spirit and volunteerism. There is a quality of life here that goes beyond the economic benefits, giving people the opportunity and confidence to build a future and to raise a family. We are an engaged community with residents who take advantage of the many opportunities to get involved in public activities, events and initiatives. Like any other community that prospers, our future is built upon our greatest resource, our people.



Photo credits:
The Municipality of Wood Buffalo

Welcome New Members

“We have long supported and followed the concept of Winter Cities and were pleased to hear that this important work is being carried on by the Winter Cities Institute”

**Jack Hebert,
President/CEO,
Cold Climate Housing
Research
Center**

Design Alaska, Fairbanks, Alaska, USA

Joe Manzella, Regional Business Program Manager, Lansing Economic Area Partnership, Lansing, Michigan, USA

John O’Day, Diamond Willow Construction Company, Anchorage, Alaska, USA

John Rowe, Landscape Architect, Fairbanks, Alaska, USA

Cold Climate Housing Research Center, Fairbanks, Alaska, USA

America's Worst Winter Weather Cities: Perception or Reality?



An article in the Forbes online magazine published on February 5, 2010, listed America's "worst winter weather cities". Weather data, including average annual temperature, total precipitation and total snowfall from the fifty largest American cities was tracked over the

Perception or reality? The city entrance sign for Hell, Michigan, caught in a moment of winter glory.



-42F is cold anywhere but Fairbanks, Alaska residents have adapted and thrive. In contrast, their spring and summer weather might be considered perfect!

previous 30 years.

The “winners” included Cleveland, Boston, New York City, Chicago, Milwaukee, Minneapolis, Indianapolis, Columbus and Detroit. The article drew an amazing amount of criticism for defining a perception of “worst winter weather” as well as comments from readers who amazingly thought their city should have made the list.

A similar listing published back in 2001 by the Old Farmer’s Almanac, was not limited to larger cities. Officials in WCI-member Marquette, Michigan, listed as the 4th coldest and 2nd snowiest city, took exception to the listing, citing the advantages and benefits of snow and cold including winter beauty and recreation opportunities.

How about a listing of North America’s worst summer cities? Such a list could be based upon a number of factors such as human comfort for outdoor activity, the number of days requiring air conditioning, volume of water used for lawn watering per capita, and overall air quality. You get the point.

What one person perceives to be “good” winter weather will not be the same as another’s opinion. Extended cold conditions and regular snowfall might be cited as having great value for maintaining good skiing, keeping snow cover white and clean and even better walking conditions. Some would say relative humidity should be low for comfort of working and playing outdoors while others might say very low humidity is uncomfortable indoors.

Whatever kind of winter weather your community experiences, a good winter city will find ways to use weather to advantage, while taking steps to mitigate the more challenging aspects of the winter season. And if your city made the Forbes list, remember that these perceived cultural preferences have defined winter cities in general as having “bad weather” while warm weather places are seen as being good. We know better....

Feature Article: The Cold Climate Housing Research Center
Sustainable Northern Communities Project

The Cold Climate Housing Research Center (CCHRC) is a private non-profit corporation created by the home building community to facilitate the development, use, and testing of sustainable, durable, healthy, and cost-effective building technologies for people living in the Circumpolar North. The CCHRC website (www.cchrc.org) includes considerable resources and reports on appropriate construction design, materials and techniques suitable to arctic and northern climates. Their work encompasses all elements of building design and construction.

CCHRC has a number of current projects on-going, including research into the effectiveness of various standard building materials in extremely cold climates; support of, and consultation with, cold climate builders in using new and innovative techniques for insulating and



The CCHRC Office and Research Facility, Fairbanks, Alaska

ventilating new and retrofit homes; and disseminating the organization's research results to a wider audience.

Of keen interest to policymakers and rural Alaska residents is the Sustainable Northern Communities program. The Sustainable Northern Shelter project was initiated in 2008 to address the need for sustainable rural housing in northern climates. The project works with each community to develop a culturally-designed, affordable, replicable and simply constructed home that uses very little water or energy and incorporates many sustainable solutions that will benefit the specific community. As interest in the program grew, the title was changed to Sustainable Northern Communities to reflect the many projects now being done in different areas of the state.

Listed below is a summary of projects associated with this initiative in Alaska:

Anaktuvuk Pass Prototype Home

CCHRC partnered with the Tagiugiullu Nunamiullu Housing Authority (TNHA) and the village of Anaktuvuk Pass, Alaska to design and construct an affordable, energy efficient, and healthy home. The prototype incorporates traditional knowledge and innovative building techniques. Through a partnership with Iligsagvik College, local student labor was trained to construct the prototype house in June 2009. A family has moved into the Anaktuvuk Prototype and assists in the continuing research on the building's performance. At the end of its first winter, the prototype has used less than half of the energy of an average home in the area.



**Anaktuvuk Pass
prototype home,
winter 2009**

North Slope SNS Homes

The Tagiugiullu Nunamiullu Housing Authority (TNHA) has asked the CCHRC to partner with them to develop designs for affordable, energy efficient, healthy, homes in six small, remote villages on the North Slope of Alaska. The ice-rich-permafrost soils of this region can be up to one thousand feet deep, and present some of the most challenging conditions to foundation design in the state. CCHRC is collaborating with permafrost engineers at the University of Alaska Fairbanks to pioneer a foundation system that successfully addresses the unique challenges of this region. Up to thirty homes may be built in six villages in 2011.

Quinhagak Prototype Home

The Native Village of Kwinhagak (Quinhagak), Alaska, asked CCHRC to partner with the residents to design a home that is particularly suited to their climate, landscape and lifestyle. The Quinhagak Prototype utilizes an innovative wall assembly that will allow the home to stay warm and dry in the extremely wet and cold environment of the Bering Sea Coast. The design maximizes thermal efficiency while minimizing shipping weight and bulk of materials to this roadless community. The Quinhagak Prototype will be constructed in September 2010.

Mertarvik Evacuation Center

CCHRC was retained by the Newtok, Alaska Traditional Council and the Newtok Planning Group to prepare a 35% Design Analysis Report (DAR) for the Mertarvik Evacuation Center, which will serve the people of Newtok as they relocate due to coastal erosion. The evacuation center will serve the people in three stages of the move: first as an evacuation center in case of emergency; second as a staging facility

***“At the end of its
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CCHRC

during the relocation; and third as a community center. The design incorporates innovative approaches to design an evacuation center that will both meet stringent energy efficiency goals and reflect community and cultural values.

Photo credits:
CCHRC

The work being conducted by the CCHRC represents an exciting and new approach to developing housing in native communities in Alaska. We are looking forward to learning more about this and other CCHRC efforts to improve the sustainability and quality of life in the North.

Questions or Comments?

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