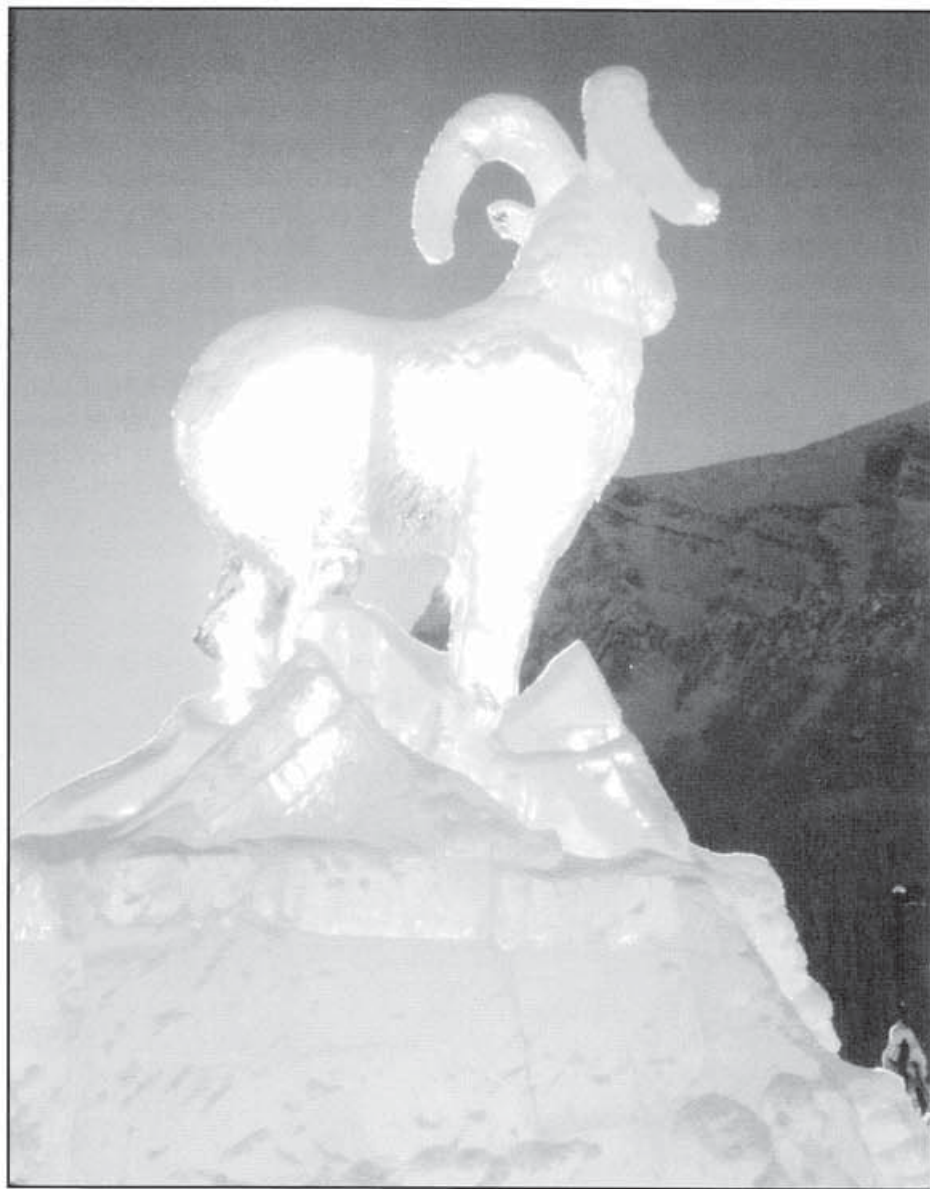




# *Winter Cities*

VOLUME 17 • NUMBER 1 • FALL 1998



*Ice takes on new life at Lake Louise's Ice Magic Competition*



Pat McMabon,  
Outgoing President,  
Winter Cities Association

## *Dear friends of Winter Cities - North America*

As President of the WCA for the last number of years, it has been my pleasure to meet so many of you and to participate as your President at many of the conferences we held around the circumpolar world. It was incredibly important to have had your support and encouragement as we went through the process of forming the WCA - North America, WCA - Scandinavia and WCA - Russia, as well as the efforts to increase our resources and efficiency by linking closer to the International Association of Northern Mayors. Although these processes are still to be completed, we are certainly well on our way!

I'd like to thank our past and present Board Members for the dedication and hard work they put into the board meetings and our general members for their interest and attendance at the board meetings and conferences, and last but not least, our secretariat which was very well looked after by the City of Yellowknife staff. The secretariat will be moving to Prince George in British Columbia in the very near future and I'd like to thank them in advance for the commitment they have offered to Winter Cities - North America by taking over the secretariat as well as hosting the next conference in February 1999.

I know that Pat Coleman and the rest of the Board Members will do a great job for all of us in the future and I wish them success.

It has been a pleasure and a privilege to have been your President. Thank you.

I look forward to seeing you all in Prince George between February 17th and the 20th, 1999 for the *Set Your Sights on Northern Lights* Winter Cities North America Conference.



## *A bright future for northern cities*

Greetings to all members and subscribers from Marquette, Michigan. It is truly an honor to have been elected President by my peers of the WCA Board. I will do my best to fill the shoes of our dynamic outgoing President Ms. Pat McMahon. However, she is not getting off the hook completely; Pat will continue to serve on the Board and manage publication of *Winter Cities*. We all wish her well.

Looking out of my office window at beautiful Lake Superior on this perfect summer day, it's hard to visualize how different the scene will be in only a few months. Many people view the change in seasons with sadness. While it is true that the north country never seems to have enough summer, regarding the onset of winter with fear and trepidation is an attitude shared by many northern residents.

However, communities and businesses across North America and the circumpolar world are changing to a more positive response to winter. There is evidence of population shifts away from the indoor-oriented, climate-controlled sun-belt, towards regions and communities which offer a multi-seasonal, outdoor-oriented and rich cultural lifestyle. New technology has overcome the communications gap which made business in the north difficult. There is a bright future for northern cities that adapt to our changing world.

Since its inception, the WCA has promoted and reinforced a shift in thinking about winter and its impacts. Northern communities offer a high quality of life, enhanced through appropriate design and the use of technology.

At our recent Annual General Meeting the Board of Directors renewed its commitment to the WCA mission. Our priorities are to provide members with a high quality magazine issued on a regular basis, the upcoming conference in Prince George, increasing memberships, and forging a partnership with the International Association of Mayors of Northern Cities (IAMNC).

We welcome ideas and energy to help us achieve these priorities. Please join us in these efforts for livable winter cities. I hope to meet you at what will be an excellent conference in Prince George in February, 1999.



*Pat Coleman,  
President,  
Winter Cities Association*



# Winter Cities

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Canada

The Winter Cities Association is dedicated to realizing the unique potential of all northern communities. Through publishing, networking, organizing conferences, facilitating research and other means, the Association seeks to make available solutions and to promote awareness of opportunities associated with the winter season.

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## Winter Cities in the New Millennium

Lulea, Sweden, just below the Arctic Circle and nearby Kiruna to the north, will jointly host the Winter Cities 2000 Forum. The theme of the forum is life and environment in winter cities.

Both Lulea and Kiruna have long traditions of environmental research and innovation. The municipality of Lulea, along with Lulea University, has been involved in important research in waste reduction and recycling for sustainable winter cities. Kiruna has long been part of space-based environmental research, using satellites, balloons and missiles.

The Forum outline is as follows:

### LULEA

**1• Plan, build and live in winter cities** - Building an ecologically sound infrastructure in a cold climate; energy, sewage and water concerns, and the latest technology will be examined.

**2• Ecological tourism** - Through research and concrete examples, learn how the tourist industry can balance ecological concerns while still promoting travel.

**3• Culture, architecture and heritage of the winter city** - Learn how winter cities use snow, ice and light to maximize their cultural heritage.

### KIRUNA

**4• Space-based environmental research** - Learn about the studies of the Swedish Institute of Space Physics, the European Space Agency, the Swedish Space Corporation and many others.

**5• Atmospheric environmental effect** - The thinning ozone layer and its effect on plant and human life will be discussed.

**6• Snowmobiles for work and pleasure** -

Snowmobiles for work and recreation are used in all northern areas. The forum will discuss their impact on the environment, safety issues and more.

**7• Rescue work in an extreme climate** - Rescue work in the north is characterized by extreme climate and low population density. Experiences and studies from all over the world form the basis of these seminars.

**8• Work in a cold climate with focus on questions related to women** - From clothing and equipment to mental preparedness, these seminars will focus on women's work and opportunities in winter cities.

For more information on Winter Cities 2000, please visit their web sites at [www.wintercities.lulea.se](http://www.wintercities.lulea.se) or [www.wintercities.kirunase](http://www.wintercities.kirunase).





# *Ice Carving is a Hot Attraction at Winter Festivals*

Ice carving is a translucent and temporary art, that will be reduced to merely a puddle when the sun shines. "Maybe that's what makes it so special," says Alice Connelly, executive director of NICA, the National Ice Carving Association based in Chicago, Illinois. "The fact that it won't last."

Today, ice carving is more popular than ever. Thousands of spectators enjoy watching ice carvers at work and viewing their sculptures each winter. Some of North America's large ice carving festivals - the Plymouth International Ice Spectacular in Plymouth, Michigan, Crystal Garden International Ice Carving Competition at Ottawa's Winterlude, Damenti's Ice Festival in Pennsylvania, SnowFest in Frankenmouth, Michigan, and Ice Magic in Lake Louise, Alberta - attract as many as 500,000 visitors to their frosty displays. "Ice carving's a huge draw in areas where people are into outdoor activities in the winter," says Connelly. "People love ice. They're amazed at what you can do with it."

Ice carving was first developed in China, and was done mainly for the delight of the ruling Emperor. It was the Japanese who brought ice carving to the public. Today, Sapporo and Asahikawa, Japan host some of the world's most prestigious and popular ice and snow carving competitions.



*Ice Magic, Chateau Lake Louise*

It was the Americans who introduced electrical tools to ice carving, making more elaborate sculptures possible and less time-consuming. The Japanese are just beginning to use electric tools in their work.

Most ice carvers learn their trade in culinary school. When they aren't participating in winter festivals, many are hired by hotels, country clubs, caterers and for weddings. Some go into cities to build castles, dragons or other elaborate outdoor pieces of art. Connelly said there are even some ice carvers who do quick comedy/carving shows at summer festivals.

Some communities are getting the public involved in their winter festivals by offering opportunities for people to carve ice sculptures themselves. In Canmore, Alberta, a Canadian town of about 9,000 near Banff, locals and visitors are invited to get into the act at the Canmore Winter Festival. Large blocks of

ice are cut by volunteers from nearby Gap Lake and hauled to Policeman's Creek Pond, where pre-registered participants are free to try their hand at the chilly art. Teams, families, couples and individual carvers spend the late January day chipping, chiselling and chopping away. The sculptures usually remain on the pond for several months. However, Connelly says public participation in ice carving competitions isn't very high in the US, likely because of concerns over liability.

There are approximately 600 NICA members throughout North America. NICA publishes a newsletter 10 times per year, and sanctions about 50 competitions throughout the winter. They are also the governing body for judging, and offer a certification program and educational opportunities. To contact the National Ice Carving Association, call (630) 323-6696, or check their web site at [www.nica.org](http://www.nica.org). ■



# ICICLES

*What's up this winter?*



## *Winter Cities on the Move*

The Board of Directors of the Winter Cities Association is working with the City of Prince George, BC, Canada to relocate the WCA Secretariat to that city from its present location with the City of Yellowknife, NT. Prince George is the host city for the upcoming Winter Cities Forum, '99.

The Board expects a number of benefits from this move. The Board is also excited about the opportunity to work with a very active local winter city committee and city administration in Prince George willing to share the responsibilities of administrative support for the Association. It is expected that Secretariat responsibilities will also involve the College of New Caledonia in Prince George.

We are grateful for the involvement and assistance provided to the Winter Cities Association by the Prince George winter

city community, and see this partnership as important for our mission. We also want to thank the City of Yellowknife for the years providing administrative support for the Association, with special thanks to Doug Lagore and Joe Kronstal, former city administrative officers, for their work and dedication to the Association.

## *Arctic Division / Science Conference*

Fairbanks, Alaska, USA  
October 25 - 28, 1998

The 1998 American Association for the Advancement of Science (AAAS) Arctic Division annual conference has been designed around the theme of international cooperation in Arctic research. It will provide a forum for scientists from around the world to come together to discuss important issues concerning global climate change. It is widely accepted that such global change will be felt first in the arctic and subarctic regions, with serious implications for the rest of the world. The newly established International Arctic Research Center (IARC) will provide state-of-the-art

facilities and opportunities for scientists to study these regions. For more information, contact Syun-Ichi Akasofu, Conference Chair Alaska Geophysical Institute 907-474-7282 or check out their web site: [www.gi.alaska.edu](http://www.gi.alaska.edu)



## *Far North Film Festival*

Yellowknife, NT, Canada  
November 13 - 14, 1998

This fall marks the third annual International Festival of Circumpolar Films in Yellowknife, NT, Canada. The festival's mandate is to celebrate film and video made about northern locales and the people who live here. It is staged by the Far North Film Society, a non-profit organization based in Yellowknife. For details on the festival, please call (867) 873-4262 or fax (867) 920-3654.





### *La Nina on la Screen*

By now, everyone's heard about El Nino's evil twin La Nina, predicted to bring cold temperatures and more precipitation to the north this winter. Don't wait for the "little girl" (Spanish translation) to strike - be prepared by getting current information from the internet. Punch "La Nina" into your computer's search engine and you'll find historical analysis of La Nina, a site maintained by the Climate Prediction Centre of the US; a detailed description of the forces shaping this weather pattern, maintained by the Pacific Marine Environmental Lab; and sea surface temperature charts, provided by the National Environmental Satellite, Data and Information Service.

### *Winter on the web*

Plan your cold-season fun in front of a warm computer screen with a web site devoted to information on Canadian winter celebrations. Whether it's celebrating the rich winter history of the French Canadians in Manitoba at Winnipeg's Festival du Voyageur; skating along the world's longest rink, the Rideau Canal at Ottawa's Winterlude,

joining the 50th Winterama; Canada's oldest winter carnival, in Penetanguishene, Ontario; cruising fast and loud in the 13th Annual Snowmobile Festival in Miramichi, New Brunswick; or taking a "snow bath" at Quebec's Winter Carnival, there's no excuse for February blues. The site also features discussion forums for specific regions, and links to visitors centres and tourism bureaus. The address for Sympatico's Winter Carnivals web site, is: [www.tnt.sympatico.ca/Contents/Travel/Features/winter\\_carnivals.html](http://www.tnt.sympatico.ca/Contents/Travel/Features/winter_carnivals.html)

### *Somebody's got to do it*

The growl of a car engine starting up in cold weather is music to the ears of the engineering staff and test drivers at General Motor's Cold Weather Development Centre in Kapuskasing, Ontario. And there's lots of growling to be heard in the dead of winter there, where minus 40 degree days are not uncommon.

GM has been testing cars in Kapuskasing, about 800 km north of Oshawa, since the 1940s. The current testing facility, built in 1972, is a 273-acre centre which features a 1.85 km ice and snow covered testing track, a cold start test yard, garages, maintenance buildings, instrument shops, battery labs and a calibrated driveway ramp. Tests include cold weather durability, heater and defrosting systems, "snow ingestions" studies and more. About 110 development vehicles used in these tests accumulate about 15 million km per year.

### *A winter market place for ideas*

Quebec City, a UNESCO World Heritage Site, will host the first World Summit on Nordicity from February 2-5, 1999. This international event under the theme of "adapting to the cold" will bring together representatives of northern communities and governments as well as the university, scientific, industrial and technological communities. Watch for details on speakers and themes in the next issue of Winter Cities.



**WORLD SUMMIT ON NORDICITY**  
CONFERENCES AND EXHIBITION

### *We'd love to hear from you*

Please help us keep WCA records and mailing lists up to date by notifying the Secretariat in of any change of address or subscriber information. The new address of the Secretariat is 1100 Patricia Blvd, Prince George, B.C., V2L 3V9 Canada. We also welcome comments, suggestions, submissions, announcements of upcoming events and letters to the editor. Please address these to our editorial office, at Suite 200, 4920-52nd Street, Yellowknife NT, X1A 3T1 Canada.



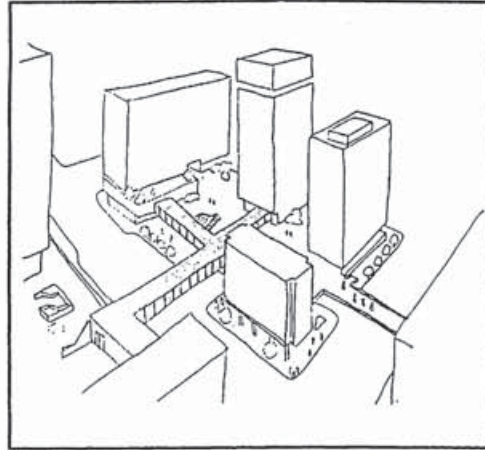
# *Planning for Winter's* CHALLENGES

BY NORMAN PRESSMAN

While urban and rural life has existed in the northern hemisphere for centuries, human endeavours to generate climate-responsive urban form are a relatively new phenomenon. The winter cities movement has firmly established the need for explicit, systematic inquiry and strategic action to improve the comfort and lifestyles of northern dwellers. Unfortunately, relevant planning literature is extremely sparse, and generally deals minimally with difficult climate-related issues or the need to stress human comfort indoors, outdoors and in transitional zones.

With the advent of the Industrial Revolution, once-vital climatic concerns gradually lost their importance as design determinants of livable urban spaces. Rapid economic development emerged as the major force behind the planning and design of urban settlements. The art and science of creating harmonious forms of shelter, so meticulously adapted to climatic demands over the centuries, began to disappear.

At the turn of the century and with the birth of sociology, theories linking climate to



*Calgary's Plus 15 Pedestrian Walkway*  
(Source: City of Calgary Planning Department)

behaviour were criticized and even rejected. Climate considerations were neutralized by international standardization and new paradigms based on economic determinism.

Today, given our easy access to resources and sophisticated technologies, the fundamental need to be sheltered from the rigours of nature has been diminished. With the advent of such climatic equalizers as artificial light, super-heating and cooling and artificial snow, hot and cold regions now possess nearly identical built forms. While accommodating their functions, these forms are often bereft of meaning. Modern economic and building regulations result in designs that are similar in both Reykjavik and Phoenix, as the same technologically-driven solutions are applied to build-

ing and collective spaces in vastly different climates.

The city's public realm - its streets, squares, parks, open spaces, lanes, boulevards and skywalks - is a critical determinant of the quality of urban life. Under severe conditions, the establishment of climatic comfort in urban space can help preserve human well-being. Where there is thermal comfort and safety, there is respect and beautification of public spaces.

To improve quality of life in winter cities, it is necessary to reduce inconvenience, offer protection from the excessive negative stressors associated with winter and optimize exposure to its beneficial aspects. This calls for the development of highly creative and innovative approaches, since few excellent case studies that express a positive attitude towards winter exist. Most winter cities have attempted to create "summer city" conditions throughout the year instead of playing on the characteristics that make northern communities unique.

Public urban spaces in these cities should be designed using micro-climatic principles that block winter winds and allow sunlight to penetrate between buildings. Inhospitable



surroundings should be "walled-out" by clustering buildings and using vegetation, wind-screens, snowfences, shelterbelts and a relatively compact spatial configuration. Shadow, wind and snowdrift



"Sun Pockets" and protected spaces are created by strategic landscaping (Source: Winter Cities Manual)

impact statements are essential. Using these tools and techniques, it is possible to create a favourable micro-climate, one which can be improved through appropriate and skillful fitting of buildings to the natural terrain. The summer and marginal seasons can then be extended, to the point where summer-type activities - sitting in the sun, for example - can take place on mild winter days.

Architect and planner Ralph Erskine of Sweden suggests that the outdoor season can be extended up to six weeks using micro-climatic planning and design concepts. While not all "summer" outdoor activities must be abandoned during the winter, micro-climatic control of the environment is essential if human animation and life is to exist year-round.

The main principles that must be incorporated in the design of all cities, but are most at risk

for exclusion in northern cities, are: year-round usability, contact with nature, user participation, cultural continuity and a pedestrian and transit-friendly environment. The shapes, volumes, textures, colours, materials and urban spaces that appear between buildings should reflect the landscape and cultural heritage of the environs. By considering these elements, planners can design multi-seasonal cities that allow for the celebration of human life in all seasons.

Vernacular urban design and folk architecture have much to teach city planners, even today. The search will continue for innovative built forms that are more sensitive to northern requirements than those expressed in the current conventional vocabulary (which is largely predicated on formal, classical elements of architectural composition and urban imagery). Inspired efforts must be analysed and their potential to mediate - between organic regionalism and internationalism, on the one hand and romantic and pragmatic realism on the other - harnessed. This should yield a wide variety of approaches that are rooted in ideology and influenced by practicality,

playfulness, folk tradition, classical design concepts and, most importantly, climate.

Community consciousness and individual awareness and understanding must be elevated to the point where urban dwellers can play an active role in making the decisions that influence their lives. Adopting a climate-sensitive approach to urban design will allow planners to make a significant and environmentally responsible contribution to the creation of sustainable living spaces. Fashioning built environments that celebrate geophysical and climatic diversity, rather than negate it, is an urban planning objective that must be constantly pursued.

*Norman Pressman, MCIP, OPPI, RPP, is Adjunct Professor of Planning and Urban Design at the University of Waterloo, Ontario. He is founding president of the Winter Cities Association, a consultant and author of Northern Cityscapes: Linking Design to Climate (1995). He can be reached by phone at (519) 886-1534, or fax at (519) 725-8950. ■*

*Pedestrians use the "Majorstubböyden" in Greater Oslo year round (Source: Ake Larson Construction, Aker Eiendom, Bergen Bank Publicity brochure)*





# PRINCE GEORGE GEARS UP FOR *Winter Cities Forum 1999*

BY CHERYL KELLEY

While many of the 75,150 residents of Prince George, B.C. are enjoying the last days of summer on the golf courses or at the lake, a contingent of Winter Cities Forum 1999 Committee members are setting their sights on next winter's northern lights.

February 17-30, 1999, Prince George will welcome over 400 Winter Cities Association delegates and speakers from around the world as well as some 2,000 visitors to Winter Cities Forum 1999 to discuss the challenges and rewards of northern living. The Winter Cities Forum will concentrate on the substance of daily living in winter communities, and explore ways to pursue a sustainable quality of life in the north into the next millennium.

## Keynote Speaker:

Dr. David Foot, co-author of *Boom, Bust & Echo: How to Profit from the Coming Demographic Shift*, will deliver our keynote address. Dr. Foot, a Professor of Economics at the University of Toronto, has researched the Canadian economy as it relates to Canada's declining population growth and subsequent aging

population. His research has contributed to a wide range of fields such as marketing, human resource planning, corporate organization, saving and investing, housing, education, recreation and leisure, unemployment, migration, government expenditures and intergovernmental relations. Dr. Foot will help us explore the relevance of demographic trends to our lives in the north: Where are we going in the north? Are more people moving from the sunbelt to the snowbelt? What changes should we anticipate? What opportunities exist?

Several other speakers are slated to address a variety of circum-polar themes in a schedule of workshops, plenary sessions, demonstration projects, tours and entertainment. Themes to be examined include environmental issues, energy, technology and conservation, planning, economic development and architecture in cold climates, natural resource development, and recreation and tourism. Participants are invited to follow one of three program topic streams examining economic, environmental or social issues - or sample a taste of each.

Workshop presenters will address our common concerns: How can we be competitive in a global economy given the



rigours of our geography?

How can we plan sustainable economic development while protecting our fragile environment? And, how can we design our communities, construct our buildings and build our infrastructure to minimize the harsh aspects of winter?

## Forum speakers:

Thorvaldur Thorvaldsson, Director of City Planning for Reykjavik, Iceland, will relate how communities in Iceland have been promoting heritage, culture and artistic features as instruments of sustainability and economic development opportunities. Paul Schurke, co-founder of Wintergreen Dogsledding Lodge in Ely, Minnesota, will share opportunities for economic development in wilderness and resource-related areas. Jeanette Townsend, Mayor of Valemount, B.C., will share marketing strategies to enable northern communities develop a product/market match for enjoyable winter tourism products. Past Winter Cities Association presidents Norman Pressman and Harold Hanen as well as recently installed Winter Cities Association President Patrick Coleman will



relate their professional experiences with planning and design in small winter communities. A broad spectrum of international and regional speakers will pique your interest in things northern.

### Northern Living Exhibition:

In conjunction with the well-rounded workshop program, Prince George's Winter Cities Forum 1999 will host a Northern Living Exhibition showcasing products and services of interest to northern community dwellers. Winter-related themes such as communications, environment, infrastructure and planning, social development, and technology will frame the exhibition's focus. Exhibitors will enjoy cost-effective local, regional, national and international promotional opportunities. The Forum expects at least 2,400 visitors to pass through the trade show's 100 booths.

### Sponsorship has its benefits:

An international, non-profit organization, the Winter Cities Association is committed to promoting winter communities, encouraging positive attitudes about northern living and offering real solutions to daily challenges. The Winter Cities Forum is sponsored every two years to bring those attitudes and solutions to the host cities. Several levels of sponsorship opportunities with incremental benefits are currently available for Winter Cities Forum 1999. Sponsor benefits include direct access to delegates through promotional materials, public acknowledg-

ment of support for Winter Cities and direct involvement with international delegates.

### Who will attend?

We're anticipating a diverse audience, encompassing economic developers, elected and appointed municipal government officials, planners, land developers, architects and urban designers, engineers, tourism and recreation specialists, environmentalists, educators, entrepreneurs, housing specialists, waste management specialists, health promotion officers and interested residents of winter communities, among many others.

Of the 400 delegates expected at Winter Cities Forum 1999, approximately 70 percent will be local or regional residents (Northern BC and Alberta), 20 percent from the rest of Canada and the United States, and 10 percent will be international guests representing such countries as China, Sweden, Japan, England, Mongolia, Finland, Norway, Russia, Iceland and Greenland.



*Cross-country skiing is only one of many outdoor winter activities in Prince George B.C.*

Winter Cities Forum 1999 delegates are "movers and shakers" in their northern communities. Fifty percent are key decision-makers in local government, both appointed and elected; 20 percent work in the non-profit organization sector dealing with community growth and development; 20 percent work in private practice with consulting, architectural, engineering and land development firms; five percent work as educators and researchers; and the final five percent are winter community residents and enthusiasts.

### Communication:

We want to keep you up to date as plans gel for the Forum and Exhibition. As a Winter Cities Association member, you will be included in our contact list. If you have had an address change or are not currently an Association member, kindly contact us. For more specific information on the Forum, exhibit space, registration or sponsorship please contact:

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Web site:

[www.wintercities99.com](http://www.wintercities99.com)

We look forward to hosting you at an excellent and productive Forum and Exhibition in Prince George next February 17-20. ■



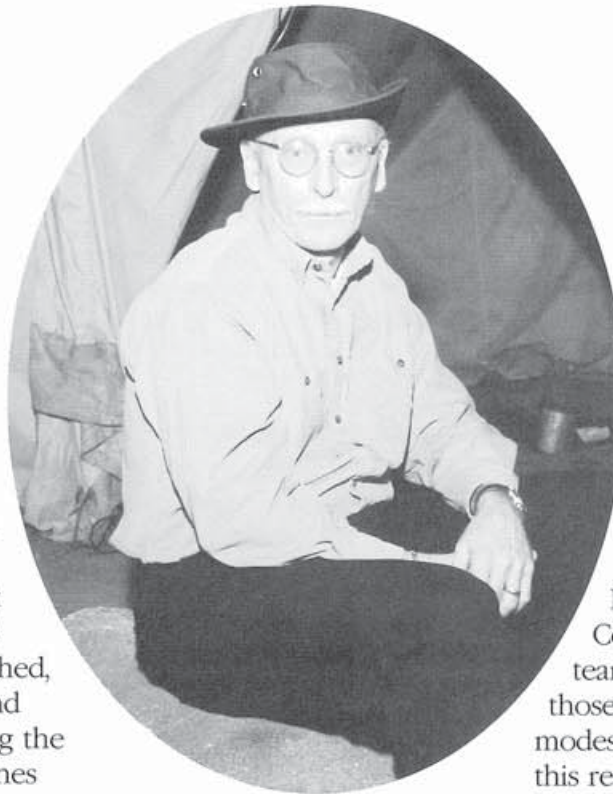
*Celebrating the*  
**GOLD RUSH**  
*100 Years Later*

WINTER CITIES' DOUG CLUTE:  
 INSPIRATION BEHIND CENTENNIAL EXPEDITION

Between the spring of 1897 and fall of 1899, a wave of fortune-seekers and adventurers flocked north with their shovels, pans and dreams, in search of gold.

From Edmonton, it was a 3,100 kilometres journey, attempted by at least 2,000 people. Some turned back, some perished, some simply stopped and formed settlements along the way. And some lucky ones struck it rich.

The Klondike Gold Rush was an extremely significant time in Canada's history, not only for its direct economic contribution but also in the legacy of cultural traditions and values it created. To



celebrate the centennial of the Klondike gold rush, the Yukon Anniversaries Commission supported a Klondike Centennial Expedition; a trip that recreated some of the gold rush

excitement, increased awareness of the era's historical significance of the era, and covered 12,000 km of Canadian terrain.

During the Gold Rush, various forms of transportation were used to reach the Klondike. The Centennial Expedition team tried to simulate those original transportation modes as much as possible in this re-enactment. Original Klondikers travelled by rail as far as Edmonton. The 20th century team left Sault Ste. Marie, Ontario July 11, travelled by car to Hay River, NT, approximating the original route. From Hay River they canoed the Mackenzie as far



as Inuvik, continued to the Arctic Red River and followed the Dempster Hwy. to Dawson City.

The trip's mission was to commemorate the Gold Rush as an epic moment in North American history, to encourage Canadian tourism to the Yukon and participation in Centennial celebrations and to develop in Canadians a sense of understanding of a common heritage, while recognizing the role of cultural diversity in the establishment of a Canadian identity.

Doug Clute, Winter Cities Association board of directors member and Senior Economist with the Ontario and Ministry of Northern Development and Mines, was the inspiration behind the trip. He was joined by John Turnbull, head of the Geography Department at Elmvale District Secondary School in Simcoe County and former instructor at Outward Bound Wilderness School, Yukon-born Bill Houston, Director, Employee Development with a computer consulting services firm, wilderness traveler Max Iland, fourth-year Lakehead University students Lanni Kirsten Uunila and Carrie McGown, and Jaroslav Roubal, "fixer" and "vehicle shuttle".

For details on the Klondike Centennial Expedition, visit their web-site at: [www.klondikepictographics.com](http://www.klondikepictographics.com) ■

# NUNAVUT:

*A new member of the circumpolar community*

Canadian map-makers are counting on April 1, 1999 to give their businesses a big boost. And residents of the central and eastern Northwest Territories are counting on that day to mark the beginning of a new era of self-government and self-determination.

It's on that day, as the reign of winter cold loosens its grip on the north, that the Northwest Territories will be divided into two separate political entities. The Northwest Territories as it now exists will lose about 22 million square km to the new territory: Nunavut.

The name translates to "our land" in Inuktitut, the Inuit language. And indeed, Inuit have inhabited the land, about one-fifth of Canada's total land surface, for thousands of years. Nunavut, with a population of about 24,000 people, is almost 80 percent Inuit. And although it will be run by a public government, it will enable the majority Inuit to effectively govern themselves within their traditional lands.

Many challenges face the new government, including administering social services, health care, education and other provincial-type responsibilities. In a land twice the size of Ontario and crossing three time zones, Nunavut is one of the most sparsely populated areas in the world. The spread-

out population, coupled with the current high level of unemployment among residents, a low high-school graduation rate and a myriad of social problems make these tasks especially daunting.

But new opportunities - in mining, construction, tourism, communications, services and travel - are expected to arise with the split. And the federal government is pitching in approximately \$620 million to help ease the pains of development. Also, three new national parks will be formed within the territory.

Nunavut's capital will be Iqaluit (formerly Frobisher Bay), a city of about 3,600 on the south-eastern part of Baffin Island. There are 27 other communities in the territory, however none are as large as Iqaluit.

With the creation of the new government come jobs that need to be filled. In response to the demand for an education work-force, Nunavut College recently launched a series of new programs aimed at training northerners in human resources, financial management, computer operations and other skills that will be in demand. And according to Iqaluit-based *Nunatsiaq News*, enrollment in the college has increased 25 percent over last year. ■



*Urban design for Winter Cities*

# MAKING THE BEST OF A COLD SITUATION

BY SCOTT STODDART

*"It's another cold Monday morning here on CRFM Radio. Minus 22 in the city, and you may as well hit the snooze button again - it's not worth getting out of bed today. Watch for a four car pile-up west-bound on the Trans Canada just after the flyover and drive safely through these skating rink conditions. Keep the radio locked on CRFM and we'll do our best to help you make it through this frightfully frigid and terribly typical January day."*

The snappy commentary of the DJ could be heard on any radio station throughout Canada for nearly half of the year and echoes Canadians' attitude towards the cold and our distinctively northern climate. This negative attitude is significant for a number of reasons. For example, tens of thousands of seniors spend up to six months a year in the warmer climes of Florida or Arizona, citing "health reasons" for their winters of expatriation. This is significant leakage from Canada's economy, as Canadian dollars are spent on American golf courses rather than at Canadian destinations. These negative reinforcements also worsen cases of Seasonal Affective Disorder (SAD), a continued state of depression associated with the winter months.

In urban planning and design, two courses of action can be taken as solutions to the challenges facing the winter city. It is possible to ignore the climate by creating an artificial environment to envelope people. This approach relies heavily on technology and vast

expenditures on energy consumption. Or, the climate can be recognized and acknowledged, and policies developed whereby the climate is integrated into winter city urban design and architecture.

The Elemental Design Group (EDG) from the Faculty of Environmental Design at the University of Calgary considered many different variables in its critique of Calgary's built and urban form. EDG's approach advocates the use of shelters from the wind and blowing snow. The covered arcade on the east side of the Hudson's Bay store downtown is suggested as a good example of effective protection from the elements without complete separation from the outside world. Actually, the idea of covered walkways can be traced back over 80 years, to Sir Thomas Mawson's plan for Calgary, completed in 1914.

Today, Calgary has 85 km of Plus 15 walkways. These elevated walkways (15 m above the

ground) have been designed to provide pedestrians shelter from adverse weather conditions in the winter months as well as safely separating them from the dangers of automobiles at street level.

These dangers, notes *Winter Cities* contributor Robert Dewar, are very real restrictions to seniors' mobility in the winter months. Add bulky winter clothes, slushy streets, and failing vision, and the Plus 15 seems like a desirable solution. One problem however, is the question of public or private space. The developer pays for the walkway initially, but who should bear the cost of the continued maintenance and security?

University of Calgary Professor Tang Lee has suggested a way of keeping the sidewalks warm, dry, and safe without totally separating them from street level. The first example is a handicapped access ramp at a Dermatology Clinic in Calgary. Exhaust heat from the building is channeled through the





sidewalk ramp in PVC pipes to keep the concrete warm. Since the snow melts on contact, there is zero accumulation, leaving it dry and free of ice all winter long.

In a similar example Reykjavik, Iceland has used warm sewage water piped through concrete to keep sidewalks and streets free of snow and ice. The same technology has even been used to heat the ground for an entire soccer field in Reykjavik. Although the initial expense is high, ongoing plowing expenses are eliminated as well as the negative environmental effects of road salt.

It is crucial that we pay attention to local realities rather than importing style from other parts of the world. Frederick Gutheim's article, *Avoiding Architectural Esperanto*, criticizes the International Style of architecture for ignorance of the vernacular of individual cities. Rather than living in the context of the local or regional surroundings, people are surrounding themselves with "climatic bubbles" that originated in distant lands. The International Style in Canada has produced skyscrapers that create frigid winds at the street level and numerous other problems.

Hitting the snooze button on the clock radio can only work for so long - eventually winter city dwellers will have to crawl out of bed and face that winter morning. It's a matter of careful planning and consideration by designers and builders that will make the winter city a more comfortable place to live. ■

*Scott Stoddart is a 3rd Year University of Calgary Urban Planning Student.*

## *Nordic Trails Adapted for Summer Uses*

BY VIKKI KULJU, U.P.  
ENGINEERS & ARCHITECTS, INC.

Most winter cities are home to miles and miles of cross-country ski trails which provide great exercise and fun during the winter season. But what happens to those trails when the snow melts and the skis are put away until the snow god smiles again?

The Highlands of Marquette County is an area in the Upper Peninsula of Michigan which comprises several quaint towns and villages. In the winter, the Highlands offers tourists and locals over 100 km of professionally groomed Nordic trails; a multitude of ungroomed trails; and snowshoe, mushing and snowmobile trails that can take you anywhere you need or want to go. The Highlands' slogan is "All Trails Start Here!" although it might be more accurate if it were "All Trails Start Here Year Round".

Our first stop was SUNTRAC (Superior Nordic Training and Recreation Area) in Ishpeming, Michigan, which is probably the most extensive trail system in the Upper Peninsula of Michigan, if not the entire state. Home to the U.S. National Ski Hall of Fame, the town is host to a variety of Nordic ski and ski jumping tournaments throughout the year. In the summer months, however, the rugged terrain and tree lined

trails provide the perfect location for mountain bikers with facilities at the trail head for bike rental and repair. With over 70 km of mapped and marked trails currently in place and more on the way, SUNTRAC is a mountain biker's paradise offering a challenging experience for all fitness levels.

In the city of Marquette, a smaller trail combining an intermediate 1.5 km loop and a beginner 1 km loop is utilized during the off-season as a "fit strip". The 25 km jogging/walking trail combines various exercise stations throughout the course for cross training opportunities. The central location within the community and easy access contribute towards making this a popular trail network year round.

One of the unique ideas for trail adaption is at Maple Lane Sports in Skandia, Michigan. During the summer months, the trail system becomes an archery simulation course. Archers sign in at the trail head and are given a scorecard. As they walk the trails, they pass various life-size, three-dimensional animal figures arranged for target practice with various degrees of difficulty. Each archer shoots and records his or her score and at the end of the round the scores are tallied for top archer honors.

Presque Isle Park in Marquette,



Michigan, is another popular tourist destination during the summer months. Surrounded by Lake Superior, the views from every angle are breathtaking and the habituated wildlife, which include albino deer, roam free. The diverse shoreline provides something for rock collectors and beach lovers, and a bog walk provides nature lovers with an opportunity to see northern animals in their natural habitat. Locals flock to the park as an indication of summer, and in the fall to see the colorful leaves. The 6 km trek around the isle's perimeter can be accessed by car, bike or foot, with various foot and bike trails weaving in and out of the park's interior. In the winter months, though, the harbour, pool and most park amenities are closed and the park is cut off from motorized traffic. During this time, the park becomes a haven for cross-country skiers and snowshoe enthusiasts. The animals still roam free and the views of unusual ice sculptures created by Lake Superior waves crashing against the rocks are spectacular.

Whether winter lovers or sun worshippers, the community must work together to create multi-seasonal recreational facilities. By utilizing our natural resources and recreational facilities year-round, our community utilizes the public dollar in the most efficient manner, increases the community's attractiveness to tourists, provides citizens with alternative recreational experiences, and enables everyone to enjoy the beauty and serenity of the trails in an entirely different, yet unique way. ■

# Road BY BRIAN BURTON TO THE Future

*Reducing the cost of road repairs for winter cities*

As the main arteries of trade, urban development and personal mobility, safe and cost effective roads are vital to modern society. In North America there are over 200 million vehicles on our highways, carrying up to 90 percent of passenger traffic, 70 percent of all commercial freight and providing employment for more than 20 million people in the road, transport and vehicle industries.

Unfortunately, in spite of our increased needs and usage, many roads have been seriously neglected. Potholes, cracks and utility cut repairs are a major maintenance cost, cause negative publicity and inconvenience. At the same time, while operation and repair costs continue to rise, government funds for their upkeep are decreasing.

Currently, utility cut repairs involve what is known in the industry as "dump-and-run" or "throw-and-go" methods using asphalt. Most of these repairs fail because of lack of adhesion to the sides or bottom of the repair, pushing or shoving of the patching mix, freeze-thaw and drainage failures.

## ***Kirkland Lake examines road to the future***

Kirkland Lake Ontario recently hosted a seminar to examine the cost savings which can result from using pavers to repair utility cuts.

David Smith, director of the Interlocking Concrete Pavement Institute (ICPI), which funds research on concrete pavers, and Brian Baker, Director of Public Works Department for North Bay, made presentations at the seminar.

Smith described the wide range of heavy-duty concrete paver applications in Canada that includes ports and shipping facilities, municipal roads and sidewalks.

"Concrete pavers," explained Smith, "are an attractive and durable pavement which, based on life-cycle cost analysis and service life of over 40 years, represent the best value for the money in municipal applications." He said that in many parts of the world pavers are the pavement of choice with over 500 million square metres installed annually.

Smith said that North American cities make thousands of cuts in





*Concrete pavers can be installed year-round.*

their streets each year to repair underground water, sewer and gas utilities. Although the cost varies depending on the size and location, there are significant expenses for the initial pavement cut, materials, equipment and repaving. There are also costs incurred from traffic delays, detours and denied access to streets as well as lost productivity due to delays and damage to vehicles from poor pavement riding quality. The current method of repairing roads also reduces pavement life by up to 50 percent and increases wear and tear on the road surface.

He also demonstrated how asphalt pavements are damaged and weakened when they are cut to make utility repairs. "Utility cuts must be repaired twice, once with a temporary

cold patch immediately after the repair and then once again in the summer to make a final repair. Concrete pavers, on the other hand, do not suffer any damage and repairs can be made almost year round." Concrete pavers for utility cut repairs are particularly suited for application in cold climates as a substitute for cold patch asphalt.

### ***London, Ontario saves money on road repairs***

Smith then presented the results of a unique, experimental method which improved the efficiency of road repairs in London, Ontario. In the past, the local gas company repaired cut pavement in the winter with cold patch asphalt after making repairs to gas and sewer lines. In the spring, the temporary cold patch repair was removed and replaced with hot mix asphalt.

In the experiment, interlocking concrete pavers were applied over low density concrete as a replacement for this traditional "cold patch" asphalt method. They were first used after the winter's interruption of asphalt supply, with the intent of being removed in the spring. However, the paver repairs performed so well that the City of London left them in place indefinitely.

All repairs completed in London with concrete pavers were installed on top of low-density concrete and have produced an

effective repair and a smooth surface. The riding quality and physical appearance is such that the transition from one surface to the next is barely discernable.

The repair method, which is now standard practice in London has been in place since 1994 and has performed well beyond expectations. ■

*Brian Burton is a frequent contributor to construction trade journals and is a Member of the Standing Committee for Technical Evaluations for the Canadian Construction Materials Commission (CCMC).*



*Brian Burton examines the installation of concrete pavers in London, Ontario.*



# *The Winter-Summer* **CONUNDRUM**

BY MICHAEL L. BARTON

From what I can gather, Winter Cities were designated as such by having an unreasonable amount of winter; that is, when compared with more southerly located cities. The phenomenon is restricted to the Northern hemisphere as there are effectively no winter cities in the southern hemisphere. This is quite fortunate really, because if this were not the case, discussions which included descriptors like "up-north" and "southern cities" would create much confusion.

The common perspective which used to prevail in what are now called "winter cities" was one of envy and perhaps even bitterness, which was directed at those living in cities with kinder winter climates. Victoria, BC is a good example. In order to challenge this notion, various people who were living in the less-kind type of winter climate began thinking along these lines: "If I have to live in this city which has twice as much winter as that city down south, what is the point of being envious and hence miserable?" My best and most sensible response to living here must surely be to accept the longer winter and make the most of it. In fact, if enough people got together with this kind of pro-active

outlook, we could find much to enjoy and share. We could even help to create a better "livability." When enough people realized that this was by far the best perspective to adopt, the Winter Cities movement sprang into being!

The new perspective meant that now we could look at those southerly located cities with the kinder winter climates, and we could ask: "Isn't it kind of boring to not have really distinct seasons?" We could talk about the boating and camping in summer, then the skiing and dog mushing in the winter, for example.

It was this kind of thinking that entered my head recently as I was out running on the ski trails around the Mt. MacIntyre area in Whitehorse. It is interesting how different the trails look in the summer. The trails themselves are rather dull and boring looking, when compared with the stark white of winter, with those clean crisp grooves cut for traditional track skiing. There is of course more green, mostly from the leaves on the birch trees, and a little grass here and there. Also, a little more colour in the form of fireweed and wild lupins etc., plus the flash of bright plumage from a bird in the

bushes. Everything in the winter is reduced to an elemental form; the skeletal trees in stark relief against the sky. But when the trees are like this you can see more clearly how they grow, are affected by the prevailing winds, and so on.

As well as the bigger differences between mid-winter and mid-summer, when you think of the run you had across the lake you are currently swimming in; there are also the shoulder seasons. The leaves are no longer green, (you notice), they are yellow, then gold, then red, brown then they are on the ground, and your trail becomes a fascinating mosaic, like a Roman tile floor. Then, one day you are out on skis again, and things are white and blue. This is when it is realized that summer and winter should not be regarded as diametric opposites, they are in fact a circle. Winter is part of summer, because it is only time which separates them; and so in turn, summer is a part of winter also. ■

*Michael L. Barton, currently enjoying the upper part of the circle in Whitehorse, Yukon, Canada, is a Winter Cities Association board member.*