



# BUFFALO TALES

Newsletter of the Manitoba Chapter

*The Manitoba Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers was chartered in September 1935. It is the second oldest ASHRAE Chapter in Canada. ASHRAE Manitoba is part of ASHRAE Region XI and covers ASHRAE members in Manitoba and Northwest Ontario.*



## ASHRAE Dinner Meeting January 17, 2008

### Water Efficiency in Buildings

Victoria Inn

1808 Wellington Avenue

5:00 pm - Social Hour

6:00 pm - Dinner

7:00 pm – Presentation

#### Overview

**Paul Nash**, a water conservation specialist, will speak about designing water efficiency in both new and existing buildings. Specific topics to be addressed include

- current trends in high efficiency fixtures
- modeling water use in typical buildings and its implications for other design factors
- real world water conservation projects
- cost impacts of water efficiency, both capital and operating
- water efficiency in the context of green buildings

**Paul Nash** is an environmental consultant based in British Columbia, specializing in water conservation. Paul came to Canada in 1997 from Australia, with a background in civil and environmental engineering in the mining industry. In Canada, he worked in utility and environmental management in the ski industry.

Between 2002 and 2006 Paul worked out of Calgary as a consultant, specializing in water conservation. This included design and implementation of water conservation projects, water audits, analysis of consumption patterns, modeling water consumption, virtually anything and everything on how to save water! In 2006 Paul relocated to BC's Sunshine Coast where he is managing the largest residential fixture refit project ever done in Canada. Paul's company, **Alpine Water and Energy** works primarily in BC, Alberta and California. Clients include municipalities, Parks Canada, ski resorts, industrial companies, hotels/resorts, property managers, and property developers.

To show Paul we support water conservation, members are asked not bathe during the week prior to the supper meeting.

## President's Message – David Stones, P. Eng.

Our December dinner meeting was very well attended. It was pleasing to see such a large number of our Past-Presidents and their continuing involvement in the Chapter. Dieter Bartel and Bert Phillips provided an update on ASHRAE standards guidelines, along with their own experiences with committees. Thanks to Tom Beggs, Mark Windeatt and Dieter Bartel, the annual cribbage tournament that evening made for a very successful end to 2007.



Planning is continuing for a two-day seminar in April in collaboration with the Building Owners and Managers Association (BOMA), the Building Energy Management Manitoba (BEMM) and the Manitoba Chapter of the Canadian Green Building Council (CaGBC). This is a continuation of the Better Buildings series by BEMM that has been sponsored by our chapter in the past.

A few of our Chapter members will attend the annual Winter Meeting of ASHRAE in New York later this month. Chapter executive and Committee Chairs will start preparations next month for reports and attendance at the Chapters regional Conference in May in Edmonton.

I look forward to seeing you on January 17 and at the remainder of the meetings this year. I am sure you will find the presentations worthwhile.

## Annual Cribbage Tournament

As always, the annual Cribbage Tournament was an enjoyable evening, hence it was a success. Thanks to Tom Beggs and Deb Dudych at Tom at Tom Beggs Agencies for organizing the event and to the business listed below for their generous contributions to the gift table, and to any who slipped under the radar by bringing gifts to the meeting without telling Tom or Deb.

Tom Beggs Agencies  
Engineered Air  
AD Williams  
MCW/AGE  
SMS  
Wholesale Heating

Frontier Refrigeration  
Carrier  
Dieter  
Eastside Ventilation  
Westwood  
Spirax Sarco

Echo Heating  
Midwest Engineering  
Derksen  
Price

This year there was a three way tie for first place. Cards were cut to break the tie. First winner was Murray Walker followed by Dieter Bartel and Derek Plouffe. As usual, everyone including John Brighty in 26<sup>th</sup> place took home a prize or two.

## ASHRAE Research Promotion Campaign– Stirling Walkes, Chapter RP Chair

The *Research Promotion Campaign* annually raises funds to support ASHRAE’s research program. It is conducted by the Society’s membership through local chapter volunteers and receives over 7,000 contributions each year from the membership and companies associated with the HVAC&R industry.

This annual support totals more than \$1.5 million annually and is matched dollar-for-dollar by ASHRAE from the proceeds of the annual winter AHR Exposition. Since ASHRAE pays all the fund raising expenses, **100% of every donor’s invested dollar goes into the research program.**

Members can submit individual or company contributions directly to ASHRAE Research Promotion, 1791 Tullie Circle, Atlanta, GA 30329 or give contributions to ASHRAE Manitoba’s Research Promotion Chair, Stirling Walkes c/o SMS Engineering Ltd. 770 Bradford St. Winnipeg MB. Make cheques payable to *ASHRAE Research* (or *ASHRAE Research Canada*).

### 2007-2008 Research Promotion Contributors

**HydronAire                      \$500**

#### **Honour Roll** (at least \$100 personal or \$150 corporate)

Stirling Walkes*	Dieter Bartel*	Russell Lavitt*	Bert Phillips*
Robert McDowall*	Robert Bisson*	George Marchildon*	Sergio Almeida*
John Brighty*	Daryl Friesen*	David Stones*	Axiom Industries*

I would like to thank all those that have supported the Manitoba Chapter Research promotion campaign to date. The contributions from the board have allowed the Chapter to reach the Full Circle level.

I would also like to thank the following individuals for volunteering for the Research Promotion Committee: Peter Gryc, Jesse Sandhu, Robert Bisson, Daryl Friesen, David Hawkes, David Stones, and Craig Perrett.

### Coming Events

#### **ASHRAE Manitoba Supper Meetings**

**February 7 – Refrigeration Night - Evaporative Condensers for Refrigeration System Efficiency and Reliability** Steve Jaczun, Regional Sales Manager -Industrial Refrigeration, Baltimore Aircoil Company discusses evaporative condenser sizing and maintenance.

**March 13 –Distinguished Lecturer Julian de Bullet**

**ASHRAE Winter Meeting, New York City, January 19-23, 2008 –** four days of terrific technical sessions and forums including “Lessons Learned in Sustainable Design Highlighted in

ASHRAE Roundtable” in which two of New York’s best-known owner/developer firms, along with the engineering designers who bring their projects to reality, discuss the challenges, opportunities and successes in delivering new green high-rise towers that add to New York City’s skyline and grace the covers of engineering trade magazines. High-Performance Buildings: Lessons from the Leaders takes place 11 a.m.-12:30 p.m. Tuesday, Jan. 22. Learn about owner motivations, technical challenges, design choices and trade-offs, costs for these projects, and perspectives about whether the expectations set early in the design process have been met once the buildings are occupied.

Attend the Joint Region X and XI Dinner on Monday the 21<sup>st</sup> of January at 7pm. The Le Rivage restaurant is less than a mile from the hotel. It has a cozy French country atmosphere offering traditional French cuisine and offers a four-course dinner including an appetizer, salad, entree and dessert with coffee for \$35.00 per plate plus tip and gratuity.

And don’t miss the **ARI trade show**, the greatest HVAC equipment and services exhibition in the world.

**Commercial Geexchange System Design Course, March, 2008** - For details, go to [www.mgea.ca](http://www.mgea.ca) or contact Inez Miller at (204) 470-6647 or [inez@mgea.ca](mailto:inez@mgea.ca) April 10; and our year end social evening, sometime in May or June.

**2008 CRC** will be May 7-10, 2008 at the Fantasyland Hotel in the West Edmonton Mall. Golf on May 7<sup>th</sup>; Technical Seminars on the morning of May 8<sup>th</sup>, in conjunction with our chapter’s bi-annual Tradeshow followed by an orientation session, the first Caucus and Welcome Party; May 9<sup>th</sup> is meetings, workshops, the President’s Luncheon and Dinner Banquet; May 10<sup>th</sup> is more meetings and workshops, the Awards Luncheon and a Wrap-Up Party. Companion tours include a guided shopping tour of some of Edmonton’s most unique and obscure shops, and tours of the local attractions. Registration and accommodation details will be presented as they become available.

## Database of HVAC Equipment Owning & Operating Costs

Engineers are routinely asked to advise building owners and managers on strategic decisions involving the life cycle and functionality of buildings. In the past, lack of valid data has left engineers without a solid basis for making these decisions. A new, free online database from ASHRAE provides engineers with equipment service life and annual maintenance costs for a variety of building types and HVAC systems.

The database can be accessed at [www.ashrae.org/database](http://www.ashrae.org/database). It contains more than 300 building types and more than 38,000 pieces of equipment with service life data. The database allows users to access up-to-date information to determine a range of statistical values for equipment owning and operating costs. With this, ASHRAE is providing the necessary methods and information to assist in using life-cycle analysis techniques to help select the most appropriate HVAC system for a specific application.

Users are encouraged to contribute their own service life and maintenance cost data, further

expanding the utility of this tool. Over time, this input will provide sufficient service life and maintenance cost data to allow the comparative analysis of many different HVAC systems types in a broad variety of applications. Data can be entered by logging into the database and registering, which is free. Information from the database also is used to update Chapter 36 “Owning and Operating Costs” in the 2007 ASHRAE Handbook, HVAC Applications which contains median equipment service life data from the first 163 commercial buildings that were used to seed the database.

The database is the result of ASHRAE research project 1237, Interactive Web-based Owning and Operating Cost Database, sponsored by ASHRAE’s technical committee 7.8, Owning and Operating Costs.

## Measuring Up: Case Studies of Green Building Energy Performance

Three speakers will provide a look at the role of performance measurement in high-performing buildings in the seminar “Green Building Energy Performance: Some Experience and Data from the Field” at ASHRAE’s 2008 Winter Meeting, Jan. 19-23, New York City.

Energy cost savings are often cited as offsetting any additional first costs of green buildings. Many times the cited energy benefits are based on predicted, not measured, savings and actual energy performance can be quite different from predicted performance. Measuring actual energy performance can be challenging because of inadequate modeling practices, failure to include operations staff in goal setting, and lack of adequate budgets for commissioning, evaluations and ongoing benchmarking. However, accurate reporting of the actual performance of green buildings earlier rather than later is important because, as more actual energy performance data become available on high-performing buildings, clearer and more realistic expectations will help establish confidence within the building design and construction industry about costs and savings, and lessons will be learned that can help us avoid repeating potential mistakes.

## ASHRAE Launches High-Performing Building Magazine

ASHRAE has launched a new magazine to help decision-makers in the building community learn about the latest developments in innovative technologies and energy-efficient design and operation. Targeted at building owners, facility managers, architects and engineers, High Performing Buildings features working case studies of exemplary buildings developed by leading practitioners in the sustainability movement.

Also included is a "lessons learned" section in each article where building designers and operators explain what went right, what went wrong, how problems were resolved and what could have been done better.

To learn more or to subscribe, visit [www.HPBmagazine.org](http://www.HPBmagazine.org). The quarterly magazine will be distributed via print and digitally.

## O&M for Net-Zero-Energy Buildings

In recent years, most of the work toward achieving high-performance and net-zero energy buildings has focused on design of such buildings. Commissioning, operation and maintenance (O&M) are likely just as critical to achieving actual net-zero-energy performance as design. The role of operation and maintenance in achieving net-zero-energy buildings is highlighted in a two part seminar at ASHRAE's 2008 Winter Meeting, Net-Zero Energy Buildings: The Impact of O&M Practices.

Other sessions in the technical program focusing on net-zero energy buildings include:

- How to Model Nothing: Energy Simulations of Net-Zero Energy Buildings
- Long Term Data Center Planning: the Push Toward Net-Zero Energy and Other Considerations
- Net-Zero Buildings: Will Energy Storage Be Essential
- Thermo-Economics of Net-Zero Design
- Exergy Analysis 2: Exergy Efficient Design, Analysis and Rating for Net-Zero Energy Buildings
- Exergy Analysis 3: Advanced Applications for New Heights in Net-Zero Energy Buildings
- Zero Energy Buildings of the Future: Is it Time to Define Resource Energy Efficiency and Apply it to Buildings in the Future
- How Low Can You Go? Case Studies of Low-Energy Buildings
- How Do You Connect Your Net-Zero Building to the Grid
- What Defines a Net-Zero Energy Building
- Low- and Zero-Carbon Cities of the Future
- Performance Monitoring to Achieve Net-Zero Energy

## A Philosophy You Can Sink Your Teeth Into

Peter Egan, one of the editors of Cycle World magazine, grew up in Elroy Wisconsin (current population about 1533). In the October issue he was reminiscing after having attended the 2007 Elroy homecoming and motorcycle meet. He noted as a kid, his dentist "was the coolest guy in town. He had a Triumph Bonneville and advised me that 'the most important thing in life is to find an occupation that will support your motorcycle addiction.'"

Peter's editorial reminded me of the dentists from my youth. They said things like "I won't be drilling very deep so I am not going to freeze" followed a while later by "For ^%\$\*#@#& sake, sit still you big suck."

I would have much preferred a dentist with a philosophy worth sinking my teeth into rather than dentists with attitudes that bite. Fifty years and a hundred motorcycle crashes later, a visit to the dentist still terrifies me.

If you share my mental dental anxiety, you will enjoy the screams of pain in "Dentists Blues" from Fred Koller's album "Songs from the Night Before". The chorus is "Some men jump from airplanes. Some men wrestle bears. I cheated with my dentist's wife then climbed into his chair."

## ASHRAE Manitoba Chapter Officers

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ASHRAE, founded in 1894, is an international organization of 55,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve the evolving needs of the public.

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