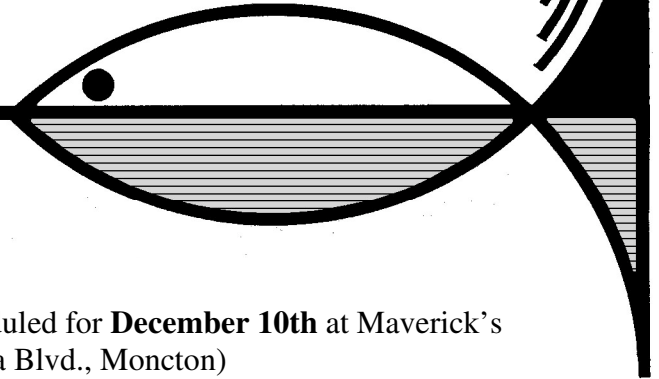


# The Herring Choker

**ASHRAE**  
NB PEI CHAPTER



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Sanderson, Yves Savoie  
Chris Thompson,  
John Willden

The next Chapter meeting is scheduled for **December 10th** at Maverick's Steakhouse & Grille (40 Lady Ada Blvd., Moncton)

This month's meeting will feature a presentation by Jan Keirstead. Jan will speak about **Buying or Selling Real Estate – Some Trends in the Greater Moncton Area.**

**It's also Past President's Night & Research Promotion Night. The Top Donors from the 2012-2013 RP Campaign will be recognized.**

A social hour will begin at 5:00 PM with a cash bar, followed by the presentation at 6:00 PM, and dinner at 7:00 PM.

## **Executive Meeting Notice**

A reminder to the Executive, Board of Governors, and the Committee Chairpersons that the Executive meeting will start at 3:30 PM at Maverick's Steakhouse & Grille.



Jan Kierstead

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## Speaker Biography:

Jan originally hails from Nova Scotia, a proud Bluenoser, growing up with no aspirations in real estate...perhaps a teacher; lawyer; coach; professional basketball player; maybe even a nun!...real estate...not a thought.

After attending Queens and Memorial and armed with an education degree, she gave teaching a whirl and quickly realized that it was not the career for her.

Recruited by a very persistent Marilyn Purdy, Jan entered the real estate profession in 1984...finally, a passion! New to the Moncton area, she employed the gumshoe tactics of door knocking, cold calling, and open housing, knowing that eventually someone would say "YES"!

After owning and operating her own real estate and appraisal agency for 10 years, she merged her company with Century 21 Countryside Realty in 1999...it was a good fit.

Jan has served on The Greater Moncton Board of Realtors in various positions most notably spearheading the success of Realtor® participation and fundraising at The Greater Moncton Dragon Boat Festival and The Breakfast for Learning Golf Tournament. The Moncton Board is extremely honored to be receiving the Brunward this year for community service.

A firm believer in education, Jan continues to attend education/information seminars to better serve her clients and holds the designations of Real Estate Broker and Market Value Appraiser, as well as being an award winning Dragon Boat Drummer!

Jan is married to Todd Tait and they are very proud of their five children, and are currently exhausted from renovating their "new" older home.

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**Chantal Daigle Verrier, P.Eng., LEED AP, CMVP**  
Manager | Energy Practice | Moncton

## SUMMARY OF NOVEMBER 2013 MEETING:

November meeting was a presentation by Lonnie Minarich from Climatemaster on Hybrid Geothermal System and Single Pipe.

The presentation highlighted the various factors that contribute to the geothermal system.

1. Lower geothermal installation cost
2. Take advantage of all tax incentives & credits
3. Give your client the lowest utility bills
4. Lower carbon emissions
5. Hybrid System

The presentation explained the ground- loop heat pump system, Surface- water heat pump system and geothermal hybrid system and design tools.

### Hybrid system

- This system combine traditional loop design, combine with fluid coolers/cooling towers in cooling load dominant situations and combine with condensing boiler/solar heating technologies in heating load dominant situations.
- The presentation explained the hybrid system which included Ground Loop – with Tower or Pond or Condensing Boiler

Advantages of the hybrid system:

- Field does not have to be designed for Maximum Load plus Safety Factor
- Much, much Lower First Cost because of Reduced Field Size.
- Very Cost Effective – Initial Costs & Life Cycle Costs
- The ground heat loop is sized so that it is just capable of meeting the peak heating load.
- A cooling tower is added to handle the additional cooling load

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## Conclusion of Hybrid System

- The 100% geothermal system was already less expensive than a standard 4 pipe boiler-chiller
- Very low maintenance
- Simple controls
- Easy after hours operation
- Received Federal Tax credit

## Single pipe

The presentation also explains the single pipe system design.

- Simple conceptual layout
- Individual unit schematic flow layout
- Pump factory installed in VHS unit
- The formula to calculate the single pipe output temperature of any single unit.

## Single Pipe Design Keys

- Use same common pipe size for all units on a single pipe loop (typ. 10-15 units per loop)
- Size single pipe diameter for cumulative gpm of all units on single pipe loop (our job 2" & 2 1/2")
- Ave total temperature rise of entire single pipe loop = 10° rise if units ave. 3 GPM/ton; 12.5° rise if units ave. 2.4 GPM/ton; 15.0° rise if units ave. 2.0 GPM/ton
- Not all units on at the same time, so diversity occurs.
- All pumps do not operate exactly at the above exact incremental gpms (operate on pump curve) unless AFR valve installed; so "free floating" of loop temperatures occurs based on actual gpm of individual pumps in unit. (Note our target gpms will fall between 2 and 3 gpm per ton; impending lab testing will confirm).

What are the driving forces?

- Lower equipment costs (VHS) one pipe vs. 2
- Onsite labor savings 1 braze joints/ unit
- Core drilling savings (every 4th unit "free"), approximately 33% savings
- Fire-stop material and labor savings, approximately 33%
- Main pump energy savings up to 25' pump head savings; however cumulative consumption of individual unit pumps decreases total savings
- Possible smaller pump size, smaller electrical requirements

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## LNG Tour Report:

Approximately 25 Chapter members and students from NBCC Saint John and NBCC Moncton toured the Canaport LNG Facility in Saint John, NB. The facility is a state-of-the-art liquefied natural gas (LNG) receiving and regasification terminal. It is the first such facility in Canada. It has the capacity to send-out capacity of 1.2 billion cubic feet (BCF) or 28 million cubic metres of natural gas per day. Fraser Forsythe, the HSSE Manager for the site, provided a guided tour of the key infrastructure at the facility: three 160,000 m<sup>3</sup> liquefied natural gas containment tanks and the 400 m long off-loading jetty.

The facility stores the liquefied natural gas in the three containment tanks at near atmospheric pressure, the tanks essentially operate like a large thermos, keeping the natural gas liquefied until it is regasified and introduced into the Brunswick pipeline for delivery to the market. When liquefied, the natural gas is cooled to -162 C which reduces its volume by 600 times. The tanks are constructed of an inner shell of 9% nickel steel, an interstitial space filled with insulation followed by an external outer shell of concrete and a roof made of reinforced concrete with a carbon steel liner. The outer shell is designed to hold the entire contents of the inner tank and allow for a controlled venting of vapours. Mr. Forsythe provided a detailed explanation of the various engineering principles involved in building and operating the facility. His knowledge and expertise was well appreciated by the students and members, which made for a very interesting tour.



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# CONGRATULATIONS!



Neil Gordon (right) of Bruce Sutherland Associates won the NB/PEI Chapter Research Promotion Recognition Draw for 2012-13. All chapter donors to the Research Promotion campaign were given an entry into the draw for every \$25 donated. The winner was awarded with a \$150 gift card to a restaurant of the winner's choice. Presenting the gift card to Brewbakers (located in Fredericton) to Neil is Rob Hoadley, the chapter's Research Promotion chair."





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## NB/PEI ASHRAE Chapter Meeting Schedule 2013/2014

**December 10, 2013**

Topic: Real Estate

**January 14, 2014**

Topic: To be Announced

**February 11, 2014**

Topic: Low Temperature Heating / LEED

**March 11, 2014**

Topic: Dehumidification for natatoriums and Ice Rinks

**April 8, 2014**

Topic: Distinguished Lecturer – David Underwood

**May 7-8, 2014**

MEET Show

**June 10, 2014**

Topic: To Be Announced

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## Social Events



**ASHRAE NB/PEI CHAPTER  
AFTERNOON OUT WITH THE MONCTON WILDCATS**

**Date: February 9<sup>th</sup>, 2014**



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