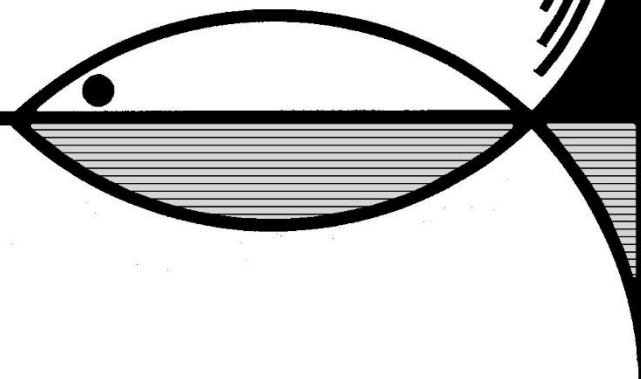


# The Herring Choker

**ASHRAE**  
NB PEI CHAPTER



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## Golf Tournament



**Thursday, 31 July, 2014 – Rain or Shine**

Moncton Golf and Country Club

212 Coverdale Road, Riverview, NB

11:30 am: BBQ – proceeds to Junior Golf

12:00 noon: Shotgun Start

5:00 pm: Steak and Lobster Supper

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## Welcome to the Board of Governors for 2014-2015

Please see the masthead on Page 1 for people's names, positions and phone numbers.

We're still looking for a YEA (Young Engineers in ASHRAE) Coordinator. If you are interested, please contact Mike Boudreau.

## Chapters Regional Conference (CRC)

This year's conference is being organized by the London Chapter, and will be held August 22-24 in Grand Bend, ON.

Our delegation this year includes:

Mike Boudreau, Delegate and President

Sharlene Innes, Alternate and Treasurer

Eric LeBlanc, President-Elect

Devin Harinarine, Historian

Dwight Scott, Student Affairs Committee Chair

Dan Boudreau, 2016 CRC General Chair

## Note from the Newsletter Editor

With the implementation of Canada's Anti-Spam regulations, I have tried to ensure that all of our members have had an opportunity to indicate that they wanted to remain on the email distribution list for our chapter.

I have not heard from a few people who may have changed email addresses since last year. You could do me a big favour by checking with your colleagues to ensure that they have received their own copy of *The Herring Choker*. If not, please forward a copy to them, and ask them to contact [dwightscott@gmail.com](mailto:dwrightscott@gmail.com) to be added back on the list.

*The Herring Choker* will also be posted on the chapter's website ([www.ashraenbpei.com](http://www.ashraenbpei.com)) for anyone to access, but the website will not include occasional special announcements.

Thanks for your cooperation.

Dwight Scott

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## Report on Technical Tour to Cormier Village Cultural Centre

Eleven people visited the Cultural Centre in the Cormier Village EcoParc, about an hour east of Moncton. The centre, which was opened in June 2012, is a wonderful gem of clever design which takes good advantage of some sustainability energy strategies. Laurie McGraw from Cormier Village, who has been on the local committee from the beginning, gave us a tour, and Paul Arseneault of *energiea.inc*, the consultant on the project, provided some useful technical information.

Among the integrated design strategies and systems examined were the following:

- **Passive Solar** – The building is oriented with its long side facing almost due south to maximize solar gain. Windows are restricted to large windows at two levels on the south (long) wall and along the east end wall. The insulated floor has a large thermal mass to help even out temperature swings in the building.
- **Building Construction** -- The entire building is constructed with ICF blocks (Insulated Concrete Forms), thereby providing a high insulating value and very low air infiltration rates.
- **Ground source heat pumps** – Twelve wells, averaging 150 feet deep, were drilled on site to provide heating or cooling as needed. Two heat pumps provide redundancy and are staged so that the heating/cooling requirements are met most efficiently. Heated and chilled water from the heat pumps is stored in large tanks. By having a “cold tank” and a “hot tank”, the heat pumps can, during certain conditions, simply exchange energy from one tank to the other, thereby doubling the overall Coefficient of Performance (COP) of the system.
- **In-Floor Heating and Cooling** – The main floor of the building is fitted with hydronic tubing for the purposes of heating and cooling the slab. Heated or chilled water is circulated in different zones of the floor, based on heating/cooling requirements. The cooling cycle is monitored closely with the integrated energy management system to avoid condensation on the floor during hot, humid days. This radiant heating system provides ultimate comfort for building occupants.
- **Fan-Coil Units** – In addition to the in-floor heating/cooling system, the ground-source heat pumps are also coupled to several large wall-mounted fan-coil units which can react quickly to heating/cooling demands. The fan-coils also provide dehumidification.

(Continued on page 4)

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## (Conclusion of report on June's technical tour)

### Solar Collector Systems –

- A solar-wall air-heating collector is mounted on the south wall. Two small solar-powered fans within the device draw room air in at the bottom of the collector and return it to the hall at the top.
- A flat plate collector and an evacuated tube collector are roof-mounted and provide heated water to the same storage tank as used by the ground source heat pumps. Two types of hot water collectors were installed to provide comparative operational data.
- **Mini-Split** – The east end of the hall can be closed off by a folding wall for small group meetings. If cooling or heating are not required for the whole building, a wall-mounted mini-split heat pump (air to air) can keep the small meeting space comfortable as required. Conditioned air is supplied to the room through two ceiling diffusers.
- **Lighting** is a combination of energy efficient fluorescent and dimmable LED pot lights.

The building has a stage with sound system, a fully equipped kitchen and a bar for social functions. Storage is provided for tables and chairs to allow a variety of setups for many different functions.

This new 7000 ft<sup>2</sup> centre replaced an older structure which burned some three years earlier. Most of the financing came from a combination of insurance money which was invested, a grant from the Atlantic Canada Opportunities Agency for demonstrating sustainable technologies, and some local fund raising. At this point in time, the building is completely paid for. A measure of its energy efficiency can be seen in comparing operating costs for the new building with the old. Previously, the cost for heating oil alone for the former center was approximately \$17,000 per year, with electricity being a separate amount. Today's building has total year-round operating costs of approximately \$4500 per year – all of this electricity. As finances allow, there are plans to add photovoltaic solar panels, which will further reduce the electricity costs.

The tour was most interesting, and provided a fitting activity for the last meeting of the 2013-2014 year. A sincere thanks to Laurie McGraw for providing the tour, and to Paul Arsenault for reviewing the draft report and adding some technical specifics.



Roof-mounted solar water heaters:  
Flat-plate on left  
Evacuated tube on right



Solar wall air-heating collector  
on right side of photo





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## Some Historical Perspectives about Air Conditioning

On July 17, 1902, Willis Haviland Carrier finished drawing up plans for what is today considered the first modern air conditioning system. It was installed in a printing business in Brooklyn in 1903, and in 1906, Carrier patented a refined version, called “Apparatus for Treating Air.” By 1936, Carrier predicted that in the future, “the average businessman will rise, pleasantly refreshed, having slept in an air-conditioned room, he will travel in an air-conditioned train, and toil in an air-conditioned office, store, or factory—or dine in an air-conditioned restaurant. In fact, the only time he will know anything about heat waves or arctic blasts will be when he exposes himself to the natural discomforts of out-of-doors.”

In 1925, Carrier installed his system in New York City’s Rivoli Theater, which heavily advertised its new toy. According to Margaret Ingels in *Willis Carrier: Father of Air Conditioning*, here’s how Carrier described the night later:

Long before the doors opened, people lined up at the box office—curious about ‘cool comfort’ as offered by the managers. It was like a World Series crowd waiting for bleacher seats. They were not only curious, but skeptical—all of the women and some of the men had fans—a standard accessory of that day.

“It takes time to pull down the temperature in a quickly filled theater on a hot day, and a still longer time for a packed house. Gradually, almost imperceptibly, the fans dropped into laps as the effects of the air conditioning system became evident. Only a few chronic fanners persisted, but soon they, too, ceased fanning. We had stopped them ‘cold’ and breathed a great sigh of relief. We then went into the lobby and waited for Mr. Zukor [the president of Paramount Pictures] to come downstairs. When he saw us, he did not wait for us to ask his opinion. He said tersely, ‘Yes, the people are going to like it.’” The Rivoli made \$100,000 more that summer than it had the previous one.

The first air conditioned cars made their debut in the 1930s, and by the mid-’50s, many cars were equipped with it. In a 1958 issue of the *New Yorker*, the talk of the town section—written by M. Pittman and John Updike—recounted a cabbie who “readily confessed” that he used to hate hacking:


“In the summer, it was a nightmare. Now I look forward to a day’s work; I can hardly wait to get out of the apartment. No more noise. No more dirt. No more heat. It makes you feel—you know—different, almost distinguished. You’d be surprised how many people see the blue sticker saying ‘air-conditioned’ on the window and stop me and ask just to be driven around awhile, to cool off. I figure business has improved twenty-five percent since I got my unit in. On top of that, my tips are bigger.” The hack concluded that “In about five years, all the cabs will have air-conditioning. It’s going to be real big business, real big.”


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## Provisional Schedule of Meetings

### ASHRAE NB/PEI Chapter 2014-2015

**Note: Meetings are normally on the 2<sup>nd</sup> Tuesdays of the month except for November**

**If you have any suggestions or comments about the meeting topics or speakers, please contact our CTTC Chair, Kevin Clannon at [kclannon@master.ca](mailto:kclannon@master.ca)**

Details regarding speakers and topics will be posted as available in future issues and on the chapter website ([www.ashraenbpei.com](http://www.ashraenbpei.com)).

July 31	Golf Tournament
September 9	Green Globes presentation, plus visit from Robyn Ellis, RVC for Student Affairs, Region 2 <i>Membership Promotion Night</i>
October 14	Technical Tour <i>Student Night</i> <i>YEA Night</i>
November 18	Presentation on Chillers* <i>Refrigeration Night*</i>
December 9	Wine and Cheese Reception <i>Past Presidents Night</i> <i>Research Promotion Night</i>
January 13	<i>Student Night</i>
February 10	<i>Membership Night</i>
March 10	<i>History Night</i>
April 14	Distinguished Lecturer <i>Research Promotion Night</i>
April 23	ASHRAE Webcast: "Retro-Commissioning and the Life Cycle Cost Analysis"
May 12	BOMA and ASHRAE Joint Meeting <i>Grassroots Government Activities Night</i>
June 9	Final meeting of the year

\* Scheduled for the 18<sup>th</sup> to avoid a conflict with Remembrance Day

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