MACGREGOR HALL


*Heating System Description*
*and*
*How to make it work*

MOUNT
HOLYOKE
COLLEGE

**Tel. 2012**

or, after normal
business hours

**Tel. 2016**

# HEATING HELPERS

Be certain that windows are shut tightly.

If your windows won't shut properly call **Facilities Management at x2012** to report the problem. We will fix it.

Drawing the window blind will help to slow heat losses during the OFF cycles of the heating operation.

If your room has a temperature sensor in it TRY NOT to locate heat producing devices like a lamp near it. This can severely limit the heat to the building.

MHC

**MACGREGOR HALL**

Monday – Friday
8:00 am – 4:30 pm
Call Facilities Management @ x2012

All other Hours
Call the Central Heating Plant
@ x2016

Mount Holyoke consumes in ½ hour more electricity than a typical 5 room house does in an entire month.

This is about 750 kilo-watt-hours.

Mount Holyoke consumes more than 38,000 kilowatt-hours of electricity per day.

This is enough electricity to supply a 5 room house for 4.2 years, or maintain 50 of these houses for a month.

Mount Holyoke burned 940,000 thousand gallons of Oil last year, for heat and hot water.

This would heat more than 1500 homes for a year. Or, a single home for more than 1,500 years.

# WHERE'S THE HEAT COME FROM?

The entire campus is heated with steam that is produced in the Central Heating Plant and then distributed to every building via underground pipes.

At the peak of the season approximately 6,500 gallons of #6 Fuel Oil is burned every day to make the steam required to heat our buildings. This steam is maintained at very high pressures and is used first to generate electricity before being utilized by the campus for heating purposes. This generated electricity is applied against the consumption of Utility (purchased) power.

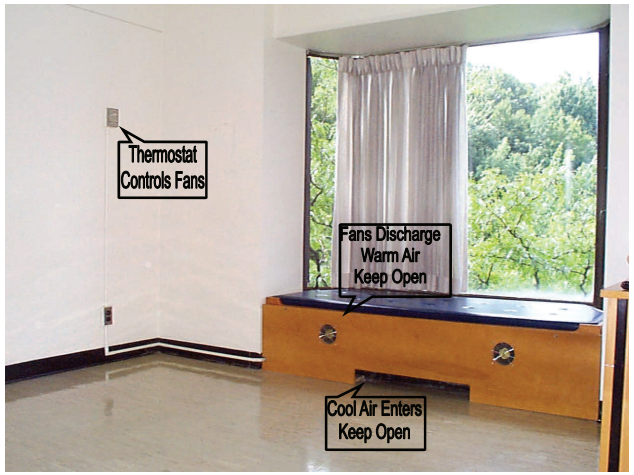
Underground distribution piping brings the steam to each building where it's pressure is reduced and made useable for the various heating systems.

Once the steam has released it's energy it returns to the CHP as condensate, to be re-heated for another cycle. About 90% of the steam returns as water for re-use.

**The Energy Management Computer watches for heat and cold around the clock**

# IT'S A CIRCULATED HOT WATER HEATING SYSTEM

Macgregor Hall is heated with circulated hot water and Fin Tube Radiation. Steam from the Central heating Plant is piped into the building where it is used to heat the circulated water. The water is then pumped around the building to heat the spaces.




Sensors located throughout the building monitor the room temperatures and report that information to an Energy Management Computer System also located in the basement. This information is transmitted to a Master Computer System in the Central Heating Plant where it is checked against a heating program dedicated to the Macgregor environment. The automatic valves respond to this program to maintain the spaces at Setpoint ( the equivalent of a Thermostat setting).

The Engineer operating the Heating Plant when necessary can override this program.

Along the outside wall of each room is a section of Fin-Tube Radiation. The radiation is behind a face board which has an opening at the bottom and two openings on it's face. These openings provide for airflow over the heating pipes, and this design depends upon a clear path for air to naturally enter and exit the radiation area in order to heat the room. A Thermostat located in each room controls fans installed in the face board. If the room temperature falls below the setting on the thermostat the fans pull the cooler air from the floor area and force it across the hot fin-tube radiation and then blow this warm air into the space. The warm air rises displacing any cooler air, which then returns to the fan / fin-tube system to be re-heated.

There is no other individual control for a system like this. Any change to the flow of hot water through a single piece of radiation would have a significant effect on all the radiation on the same piping loop.

This system provides generally even space temperatures and automatically compensates for outside conditions.

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