

NMU AND SUSTAINABILITY



REDUCING CONSUMPTION FOR SUSTAINABILITY
CONTAINMENT OF COSTS FOR AFFORDABILITY

Northern Michigan University

- 61 Buildings
- 3.47 million sq ft



• Electric Bill for 2006:	\$2,428,026
• Gas Bill for 2006:	\$3,388,529
• <u>Water Bill for 2006:</u>	<u>\$663,065</u>

Total Utility Bills: ***\$6,479,620***

Sustainability:

Reducing the environmental impact on the planet to minimize climate change by reducing the use of fossil fuels, conserving resources and reducing waste.



Measures Taken by NMU to Promote Sustainability

Reduced energy consumption

Explore renewable resources to produce heat and electricity

Adopted green building practices

Implemented recycling program

Converted to green cleaning products



Ways NMU Reduced Energy Consumption

Following Energy Saving Projects:

Computer Controlled Heating and Cooling

Thermal Efficient Windows for the Dormitories

Individual Heating Controls in the Dormitory Rooms

New Efficient Lighting & Controls Technology

New Energy Efficient Architectural Design Components

Water Efficient Fixtures, wells for irrigation, and waterless
urinals



NMU's Cost and Use Reductions

- NMU has saved over 25 million dollars since 1973 with the Energy Conservation program.
- Heating and cooling use is down 25% while conditioned space is up by 146.8%
- Electrical use is down 1% while square footage of space is up 77.7%
- Water Use is down 34% while square footage of space is up 77.7% and irrigation programs have been initiated

New Co-Generation Boiler with Multi-fuel Capability

- Will produce electricity and steam for heat to campus buildings
- Plan is to burn wood by-products and wood chips
- Secondary fuel source: natural gas, coal back-up
- 20-30% more efficient
- Energy savings approximately \$1,000,000 per year
- Expected to be one of the cleanest plants in Michigan
- Expected to create 90-120 permanent new jobs in the Upper Peninsula
- Will provide heat to Marquette General Hospital
- Three years from design to full operation

NMU Adopted Green Building Practices in 2005

What is LEED® ?

Leadership in Energy and Environmental Design

The LEED Green Building Rating System is the nationally accepted benchmark for the design, construction and operation of high performance green buildings.

LEED promotes a whole-building approach to sustainability by focusing in five areas of human and environmental health:

- Sustainable site development

- Water savings

- Energy efficiency

- Materials selection

- Indoor environmental quality



Northern Michigan University - 2007

***Gunther C. Meyland Hall LEED® Green Building
Certification – Certified***

**First Certified Residence Hall in the State of
Michigan, Wisconsin, Minnesota, Ohio and Indiana.**

First Certified building in the Upper Peninsula.



***Northern Michigan University
2008***

***Maude L. Van Antwerp Hall LEED® Green Building
Certification – Anticipated Silver***

NMU Recycling Program

- NMU has Recycled a Total of 5230 Tons Since 1992
- Average Tons to Landfill = 1,000 Tons/Year
- The Recycling Program has Reduced Tons to landfill by approx. 378 Tons/Year
- NMU adopted Single Sort Recycling in 2008
Paper, Glass, Plastic, & Metal



NMU Recycling Program

Accomplishments:

Cardboard	561 Tons
Mix Office Paper	3,007 Tons
Residence Hall Program	319 Tons
Animal Bedding	103 Tons
Married Student Apts.	180 Tons



NMU Recycling Program

Accomplishments:

Composting	N/A
Metal (Construction)	1,013 Tons
Metal /Glass (Kitchens)	15 Tons
Fluorescent Lamps	32 Tons
Waste Oil	12,400 Gallons



Environmental Efforts

Dining Services – Biodegradable plates, cups and eating utensils.

- ❑ Use SpudWare cutlery composed of 80% potato starch and 20% soy oil.
- ❑ Use GreenWare cups composed of a corn-based alternative.
- ❑ Use Chinet molded-fiber plates made from 100% renewable resources .
- ❑ Installed a pulper that grinds and mixes organic matter – food scraps, cardboard, aluminum foil and paper with water.
Reduces waste volume by up to 85%.



Future Environmental Efforts

- ❑ Use of all Green Cleaning Supplies by July 2008
- ❑ Use of Biofuel
- ❑ Improve Campus Landscape



NMU Encourages Purchasing Recycled Products

- ❑ Paper Towels
- ❑ Garbage Liners
- ❑ Duplicating Paper and Envelopes
- ❑ Restaurant Napkins
- ❑ Restaurant cups, plates, containers, and takeout boxes



What Can All of Us Do To Conserve Energy?



Conserve
Don't Waste

