College of Menominee Nation Sustainable Development Institute

Beau Mitchell
Sustainability Coordinator
September 28, 2011
Denver, Colorado

Overview

- Background on Sustainable Development Institute
- Menominee Forest
- Institutional Commitments
- Campus Sustainability Research
- Internships
- Outreach

College of Menominee Nation
SUSTAINABLE
DEVELOPMENT INSTITUTE

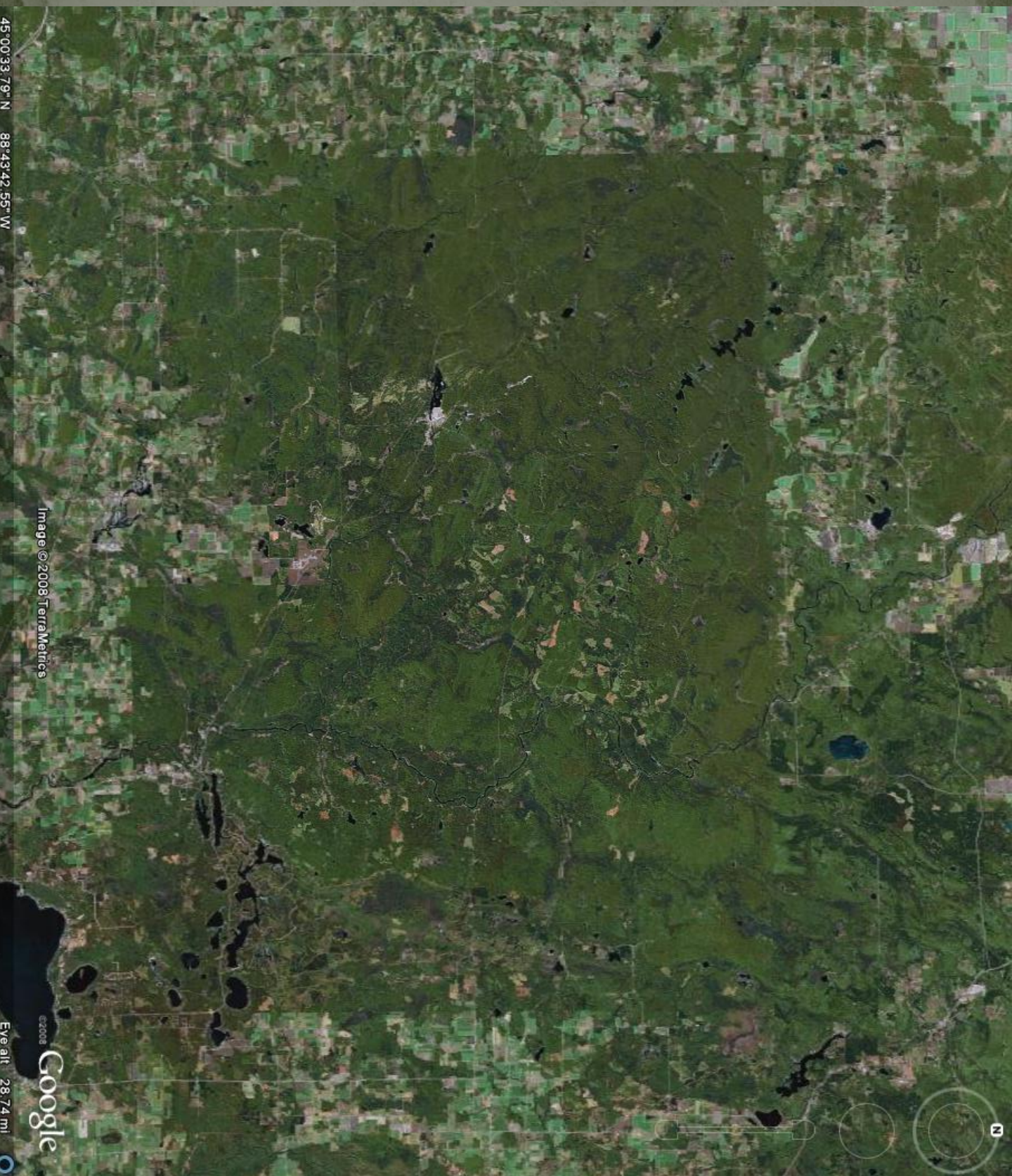
Mission

The Sustainable Development Institute's mission is two-fold: to reflect upon, rediscover, and strengthen the interconnected dimensions which define Menominee sustainable development and to disseminate and advance the tenets of sustainability of what is learned, known, and valued of the Menominee approach to sustainability to those who wish to share this knowledge and wisdom.

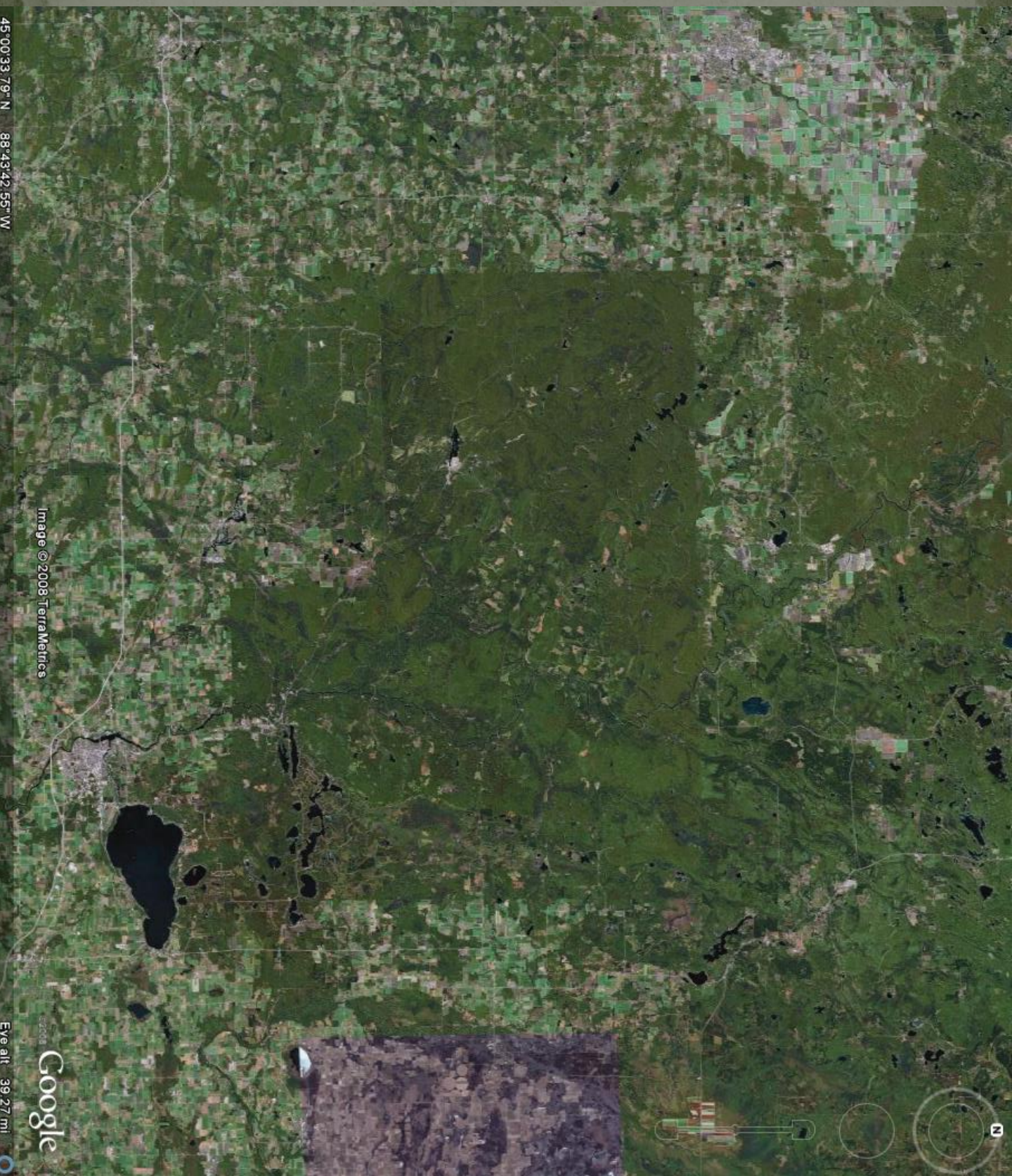
The Institute fulfills its mission through:

- **Scholarship**
- **Academic preparation in sustainable development**
- **Research and demonstration projects**
- **Policy recommendations**
- **As a seat for both formal and informal forums on sustainable development**

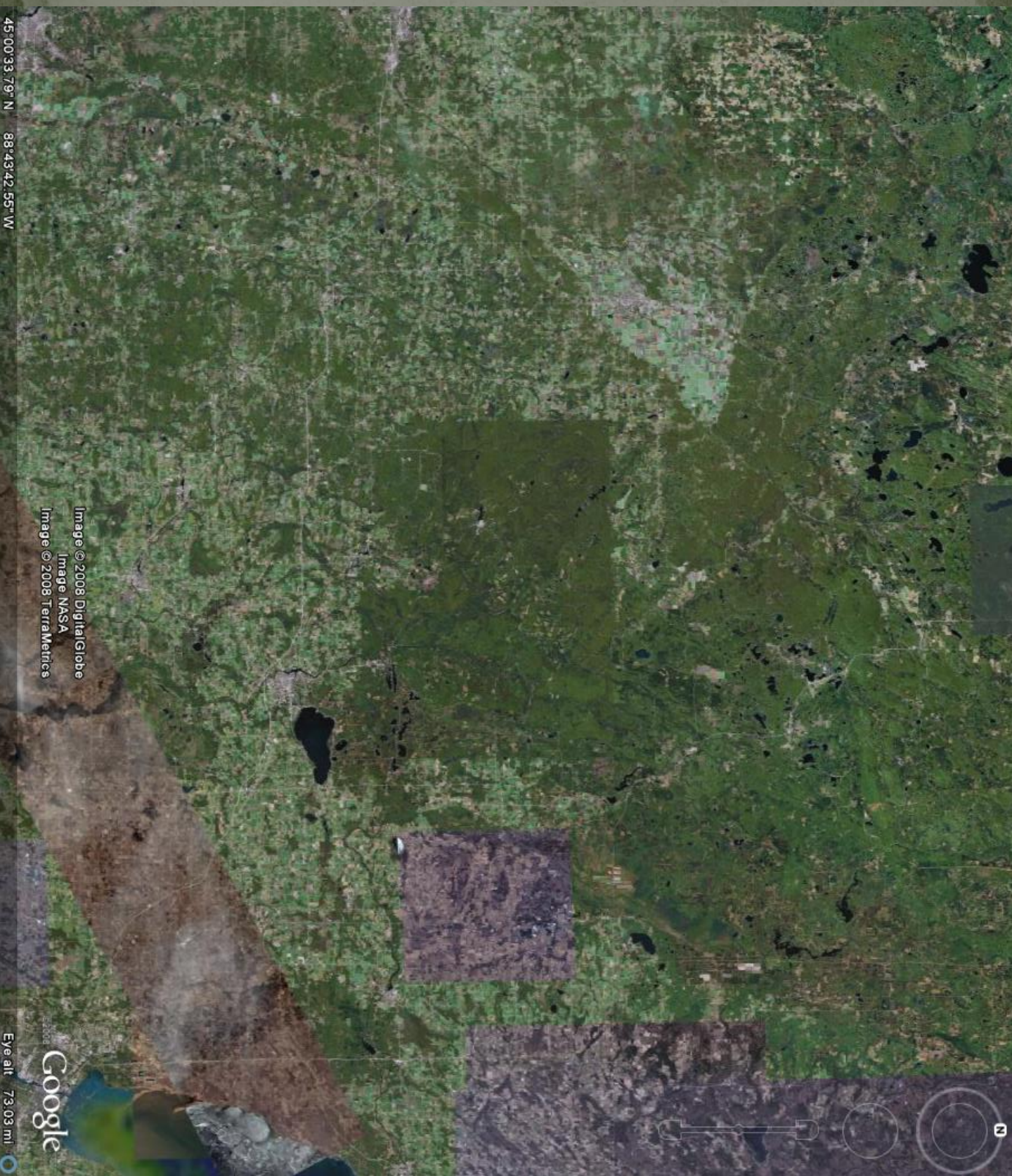
28.74 Miles


45°00'33.79" N 88°43'42.55" W
Image © 2008 TerraMetrics
©2008 Google
Eye alt 28.74 mi

39.72 Miles

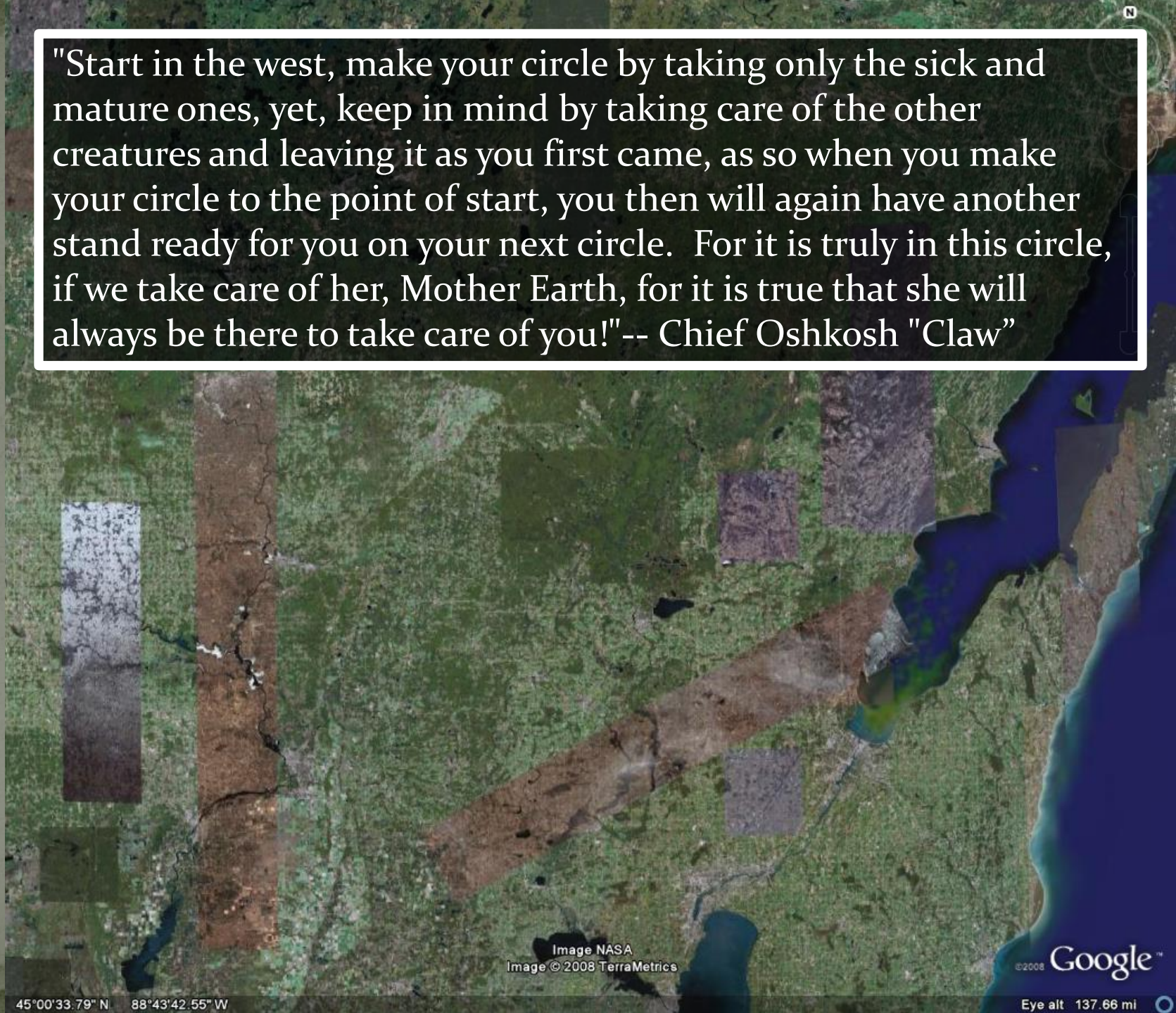

45°00'33.79" N 88°43'42.55" W
Image © 2008 TerraMetrics
Google
Eye alt 39.27 mi
N

73.03 Miles


45°00'33.79" N 88°43'42.55" W
Image © 2008 DigitalGlobe
Image NASA
Image © 2008 TerraMetrics
Google
Eye alt 73.03 mi

137.66 Miles

"Start in the west, make your circle by taking only the sick and mature ones, yet, keep in mind by taking care of the other creatures and leaving it as you first came, as so when you make your circle to the point of start, you then will again have another stand ready for you on your next circle. For it is truly in this circle, if we take care of her, Mother Earth, for it is true that she will always be there to take care of you!"-- Chief Oshkosh "Claw"



- 235,000 acres
- > 90% forested
- Sustained Yield
- Continuous Forest Inventory
- Forest Management Plan & Economics
- Intelligent Tinkering

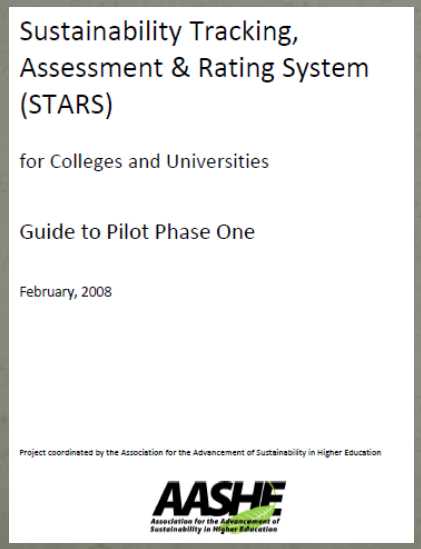
- "It is said of the Menominee that the sacredness of the land is their very body, the values of the culture are their very soul, the water is their very blood. It is obvious, then, that the forest and its living creatures be viewed as food for their existence."

–Marshal Pecore, MTE Forest Manager, Journal of Forestry, July 1992

Commitments

- American College and University Presidents Climate Commitment

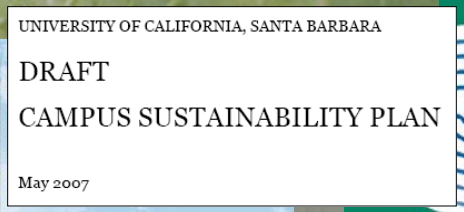
- Clinton Global Initiative University

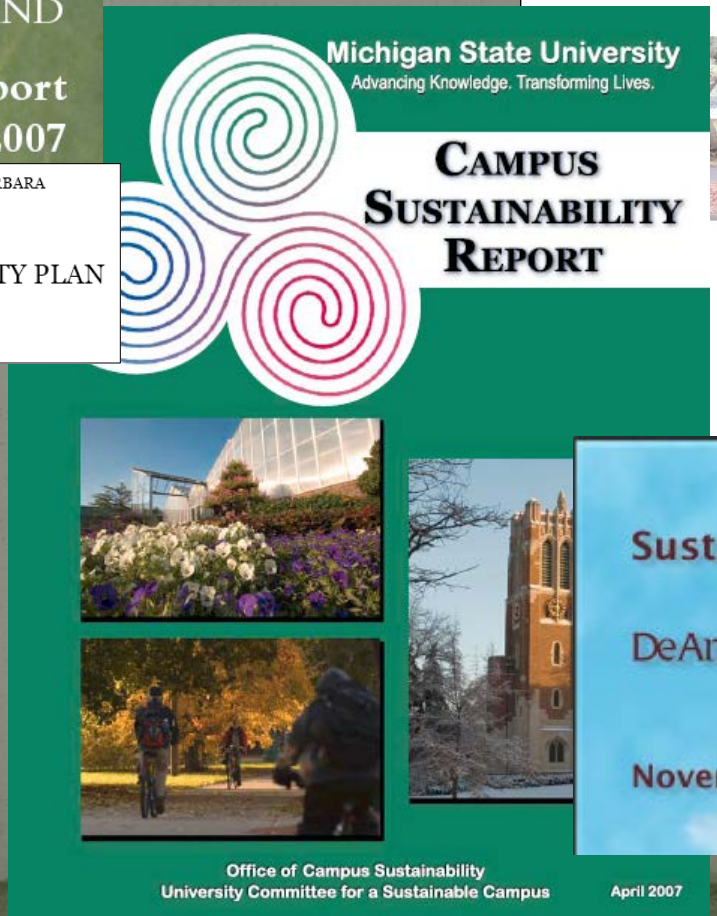


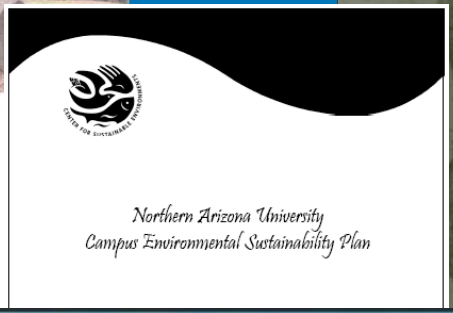
Tribal College Sustainability Indicators Research Project

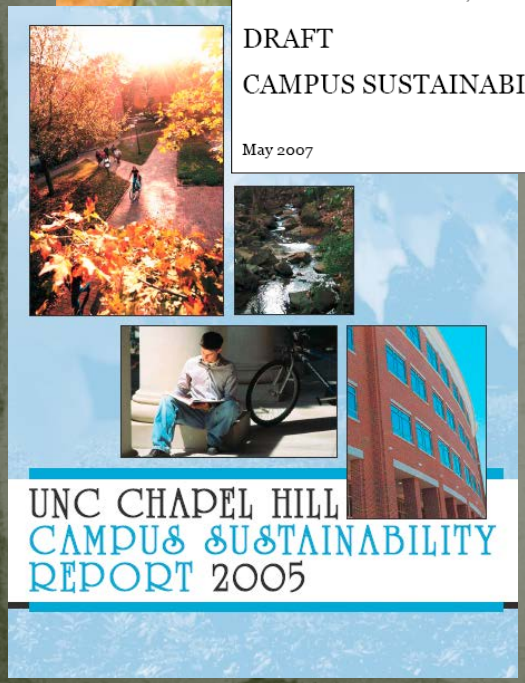
- USDA CSREES Tribal College Research Grant Program
- Research Objectives:
  - Research and establish indicators for sustainability at a tribal college
  - Research and document baseline conditions and conduct an audit of sustainability utilizing the established indicators
  - Establish and prioritize goals for a sustainable tribal college
  - Develop a framework for a Tribal Colleges and Universities sustainability indicators performance measurement system

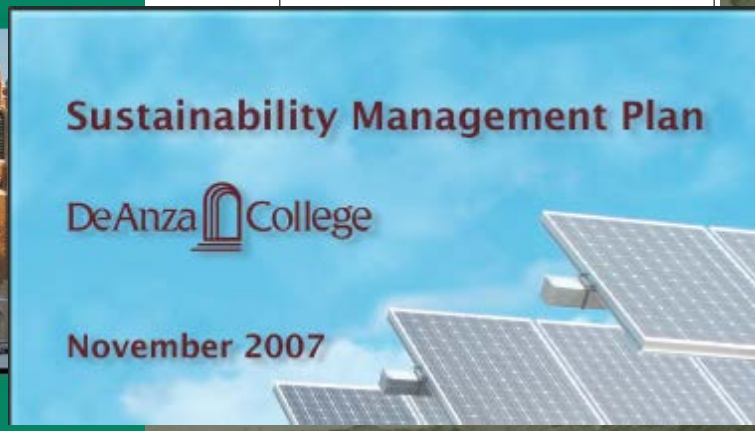
Existing Campus Sustainability Plans and Reports







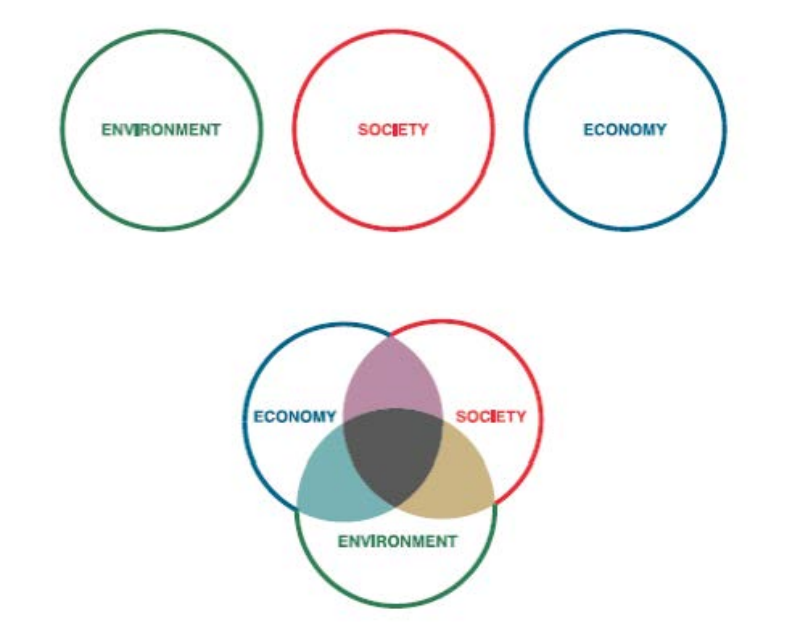




Visioning Sustainability

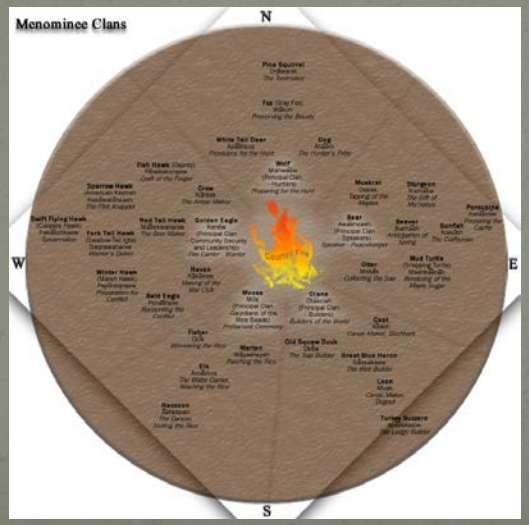
The Visioning sessions were conducted to get input from the college community on what a sustainable College of Menominee Nation looks like. Indicators of sustainability will be identified and benchmarked from the results of the Visioning sessions.

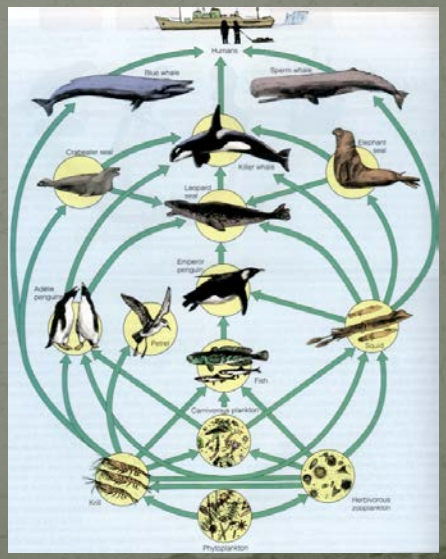
Models for Sustainability



Models of Sustainability

- Water is sacred
- "What we do to the forest, we do to ourselves"
  - Adrian "Dusty" Miller, MTE President
- Kah-kiyo ah-wah kah-toh-ya = We are connected
- Mis-atim kah-nepoit nipi





http://www.ust.hk/~webpepa/pepa/gallery/Environmental_Science/4-15b.JPG

Things we do well

- **Technology**
  - IT-software that automatically shuts down computers in labs in Keshena and Green Bay
  - Using less electricity at the office level
  - **Access to technology**
- **Working with Others**
  - Articulation with UW Madison
  - Collaborate with other entities that are sustainable-MTE
  - Inspiring other people to be more sust. Casino steer clear of Styrofoam
  - **Investment in coffee**
- **Preserving our Resources**
  - Preserve trees when building
  - Geothermal and passive solar in library
  - Planning for guest house with reusable items
  - Using Environment to our advantage-trails
  - Reuse textbooks
  - **Recycling bins widely available**
  - Recycle toner cartridges
  - Consolidating heating sources
  - Facilitating proper disposal of hazardous waste
  - Starting movement towards more sustainable building construction
  - Using company car to carpool to Green Bay site and out of town workshops
  - Staff and Faculty carpool
- **Student Involvement**
  - **Good Student involvement in sust. Activities**
  - Institutionalizing SD Students
- **Lead by example**
  - **Sustainability pledge**
  - Good job keeping sust. in forefront of curric
  - Set example of how the forest is being maintained
  - Willingness to accept new ideas of sust.
  - **SDI presenting opportunities**
  - SDI keeping opportunity of being sust. open to others-encouraging recycling
  - Institute dedicated to sustainability
  - Write grants for sustainability
  - Have sustainability coordinator
  - Positive human perception of college
  - Highway cleanup
- **Education**
  - Educate well
  - Education on sustainability
  - **Mandatory SDE 100 course for students**
  - Tutors available
  - Awareness of what other Colleges and Univ. across US are doing towards sust.
  - Workshops/brown bags that highlight other sust. Topics
  - Starting to educate staff and faculty more on sust.
  - Communicate internally about sust.
  - **People are being more aware of sust.**
  - Network, word of mouth, good job of inviting people into process
- **Culture**
  - Justifying sustainability through culture
  - Improvement of Menominee Language accessibility
  - College promotes Menominee as leaders in sust.

Things we can do better

- **Food & Vending**
  - **Lunch program/on site-soup pot**
  - Grow own food to sell in cafeteria
  - Need a better selection of food on campus
  - Sell organic items in bookstore
  - Request less packing materials from common vendors
  - Buy local
- **Education**
  - **Integrate Sustainability across curriculum**
  - Making cleaning and care of environment and surrounding more hands on for students
  - Take campaign to community-high school, universities-bring here to learn
  - College farm, educate community on agriculture/farming
  - Better planning of courses and schedules
  - Getting the word out on our sustainability efforts and initiatives, be competitive
  - Advertise articulation agreements more
  - Educate tribal business councils on sustainability
  - **Hold classes and workshops in other area schools, communities and target younger generations**

- **Technology**
  - More ITV
  - Go virtual- reduce number of servers to reduce the amount of electricity
  - Digitize our business-paper reduction, scanning documents, etc.
- **Travel**
  - Ride boards-more car pooling
  - Travel/busing between campuses

Things we can do better

- **Operations**
  - Host more recycling
  - Recycle bins outside buildings
  - Reduce travel
  - **Proper labeling of recycling bins**
  - Move to book rental system
  - **Need better communication about out-outstanding advances**
  - More Native involvement in campus planning
  - CMN as a community needs more information as to what other departments are doing in regard to sustainability
  - With in the staff-offer more professional development
  - More advertisement
  - Use ongoing projects as educational-demonstration for education
  - CMN Arbor Day or month-month-plant trees in reforestation for areas
  - Sustainability train for each career
  - Need to develop one strong model of sustainability as a demonstration to others, ie green building
  - Student involvement in tornado drills
  - Better cost-benefit analysis of need for buildings
  - Build greener
  - Earth Day clean up, more frequent environment clean up days with staff allowed time off

- **Resource Conservation**
  - Use resources more efficiently
  - Shut lights off when we are not using them
  - Better heating system
  - Less water waste
  - Dials in each room/office to regulate room temperatures
  - Incorporate alternative energy sources on campus
  - Energy consumption in Glenn Miller is very sporadic-needs improvement
  - Better manage our energy costs
- **Working Together**
  - Partner with Oneida Tsyunhehkwa
  - **Enhance to strengthen sust. Issues with MTE, Casino, School dist…**
  - **Need to market our sustainability efforts more to the outside**

Areas of Focus: Action Items

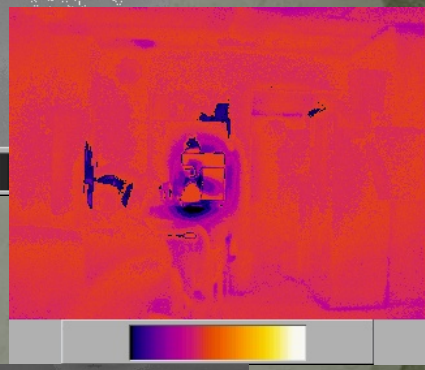
- Menominee Language
- Greenhouse Gas Emissions
- Energy
- Transportation
- Waste
- Water
- Indoor Air Quality
- Procurement
- Food
- Academics
- Financial
- Student/Staff/Faculty Retention
- Health & Wellness
- Communications

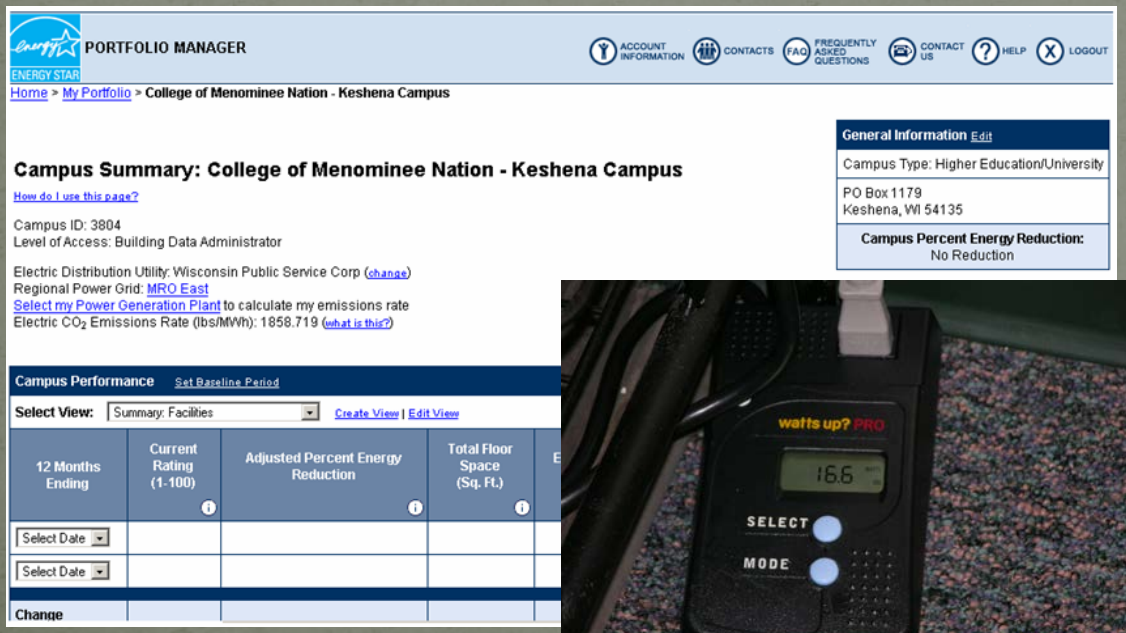
Student Internships

- Energy Benchmarking
- Greenhouse Gas Emissions Inventory
- Transportation Survey
- Health and Wellness Survey
- Indoor Air Quality
- Food Miles
- Waste Characterization
- Vermaculture – Worm Composting
- Renewable Energy Portfolio for Campus
- Cultural Indicators of Sustainability
- Invasive Species: Emerald Ash Borer

Energy Benchmarking

- Energy Star Portfolio Manager
- WattsUp
- Thermal Infrared Imaging





Microsoft Excel - SDI Coffee and Coke

G177 =G176*7

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	(Date) Time	Watts	Volts	Amps	WattHours	Cost ($)	Mo Avg kwhr	Mo Avg Co	Max Watts	Max Volts	Max Amps	Min Watts	Min Volts
4	11/26/08 0:20	216.6	123.5	1.811	3716.5	0.297	285.1	22.808	593.7	123.7	7.667	216.6	121.2
28	11/26/08 3:45	223.3	122.7	1.878	5138.3	0.411	289.05	23.124	587.7	122.9	7.592	223.3	120.2
29	11/26/08 3:53	674.2	120.6	7.887	5170.9	0.413	287.69	23.014	907.9	123.2	23.533	215.3	112
30	11/26/08 4:02	587.4	120.9	7.545	5254.4	0.42	289.15	23.132	674.2	121.6	7.891	581.5	120.5
31	11/26/08 4:10	215.8	122.5	1.813	5298.3	0.423	288.44	23.074	588.2	123	7.584	215.8	120.5
32	11/26/08 4:19	584.9	120.7	7.514	5359	0.428	288.64	23.09	718.9	122.8	23.521	214.8	111.6

Total Watt-hours used: 9488.6 = 9.4886 Kilowatt hours

Pay $0.096 / KWH

1 Day of use costs = $0.91

1 Week of use costs = $6.38

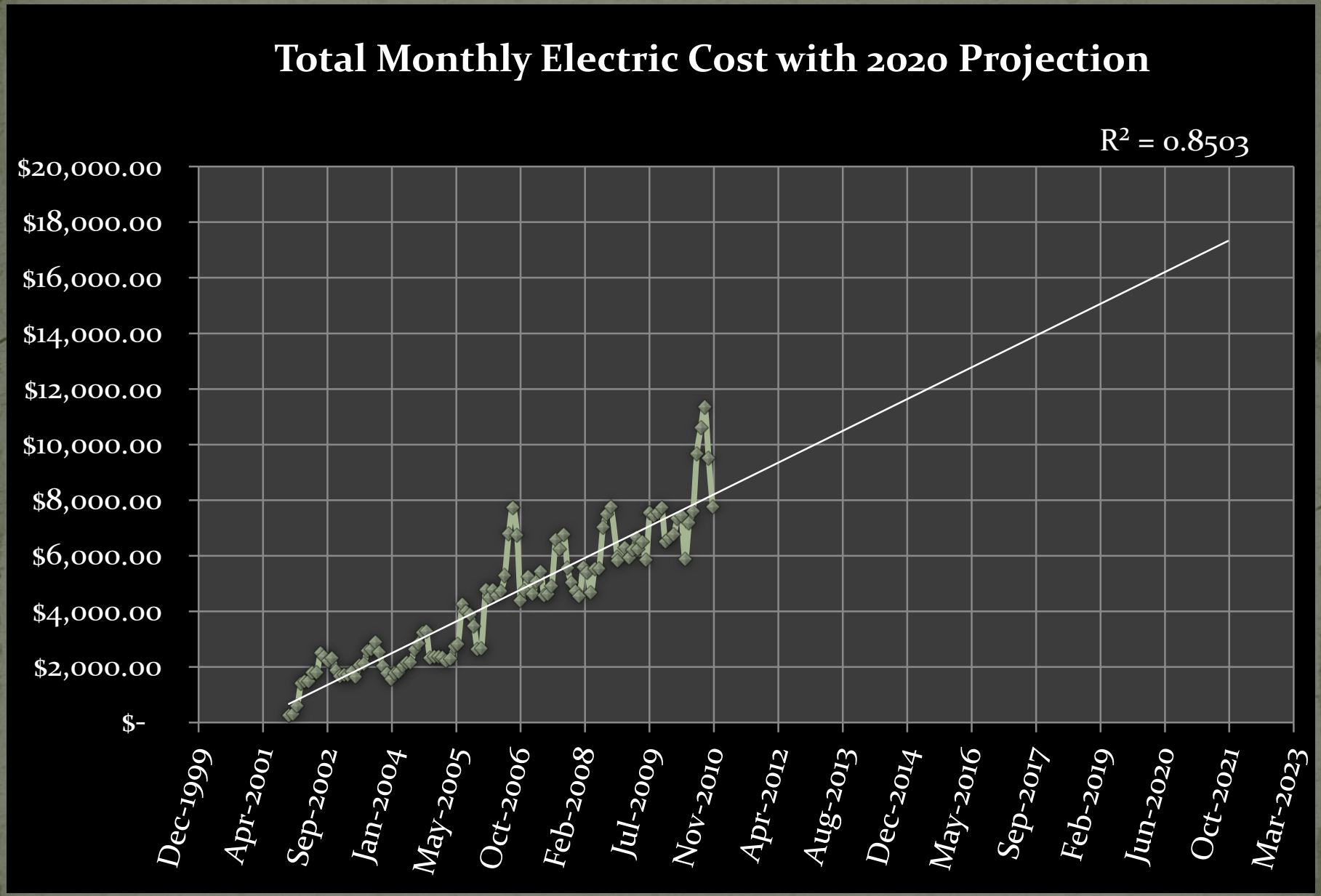
1 Year of use costs = $331.57

5 Years of use costs = $1,657.85

1 year avg for 1 soda machine = 337.97

1 year avg for 7 soda machines = $2,365.79

5 year avg for 7 soda machines = $11,828.94


Total Monthly Electric Cost with 2020 Projection
R² = 0.8503
$20,000.00
$18,000.00
$16,000.00
$14,000.00
$12,000.00
$10,000.00
$8,000.00
$6,000.00
$4,000.00
$2,000.00
$-
Dec-1999
Apr-2001
Sep-2002
Jan-2004
May-2005
Oct-2006
Feb-2008
Jul-2009
Nov-2010
Apr-2012
Aug-2013
Dec-2014
May-2016
Sep-2017
Feb-2019
Jun-2020
Oct-2021
Mar-2023

Greenhouse Gas Emissions Inventory

Institutional Data

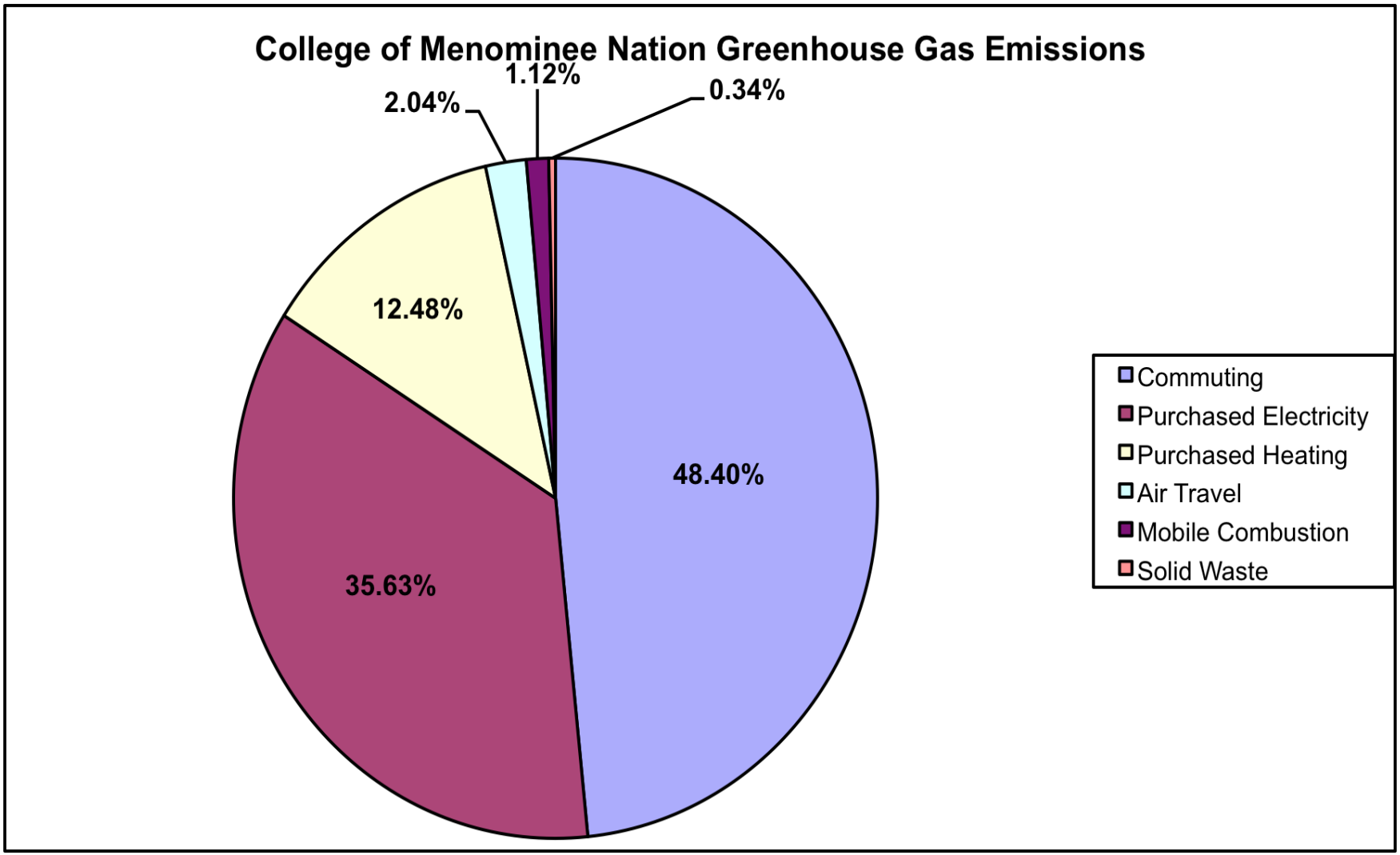
- Population
  - Full time students (#)
  - Part-time students (#)
  - Summer school students (#)
  - Faculty (#)
  - Staff (#)
- Physical Size
  - Total building space (square feet)
  - Total research building space (square feet)
- **Purchased Electricity**
- Electric produced off-campus
  - Total kWh of electricity purchased
- Monthly electric bill ($)
- **On Campus Stationary Sources**
- This category includes all stationary sources of emissions on campus (heating, cooling, cooking, laboratories, etc.)
  - Residual Oil (#5 -#6) (gallons)
  - Distillate Oil (#1-#4) (gallons)
  - Natural Gas (MMBTU)
  - Propane (gallons)
  - Incinerated waste (MMBTU)
  - Coal (short ton)
  - Solar / Wind / Biomass (MMBTU)
- **Refrigeration and other Chemicals (PFCs, HFCs, SF6)**
- All other greenhouse gases including hydro fluorocarbons, iodocarbons, fully fluorinated species, ethers and halogenated ethers, and other gases (pounds)
- **Water and Waste Water**
- Potable water
  - Sourced from directly from groundwater or community water main
  - Daily consumption (gallons)
  - Monthly water bill ($)
- Waste water
  - Quantity leaving campus daily or monthly

American College & University Presidents Climate Commitment

- **Solid Waste**
- Recyclable waste
  - Total monthly weight of recycled material (pounds)
    - % to recycling facility
    - % composted
  - Distance to recycling facility (miles)
    - Frequency of trips (# of times / month)
- Includes all solid waste produced by campus except waste composted, recycled, or burned on campus for power
  - Incinerated waste (waste to energy plant) not used for school power
    - Mass burn incinerator (short tons)
    - Refuse derived fuel (RDF) incinerator (short tons)
  - Landfilled waste with no CH4 recovery (short tons)
  - Landfilled waste with CH4 recovery and flaring (short tons)
  - Landfilled waste with CH4 recovery and electric generation (short tons)
- **Transportation**
- University Fleet
  - Gasoline Fleet (gallons)
  - Diesel Fleet (gallons)
  - Natural Gas Fleet (gallons)
  - Electric Fleet (kWh)
  - Other Fleet (MMBTU)
- Air Travel
  - Faculty / Staff Business (miles)
  - Student Programs (miles)
- Commuters
  - Students
    - Students (#)
    - Percent commuting by personal vehicle (%)
    - % total students driving alone
    - % total students carpooling
    - Trips / day
    - Days / year
    - Miles / trip
    - % commuting by bus
      - Passenger trips / day
      - Passenger trips / year
      - Passenger miles / trip
  - Summer School Students
    - Total summer school students

http://www.cleanair-coolplanet.org/

Transportation is Largest Contributor



Climate Action Planning

- Component of Campus Sustainability Planning
- Recommendations to CMN planning entities

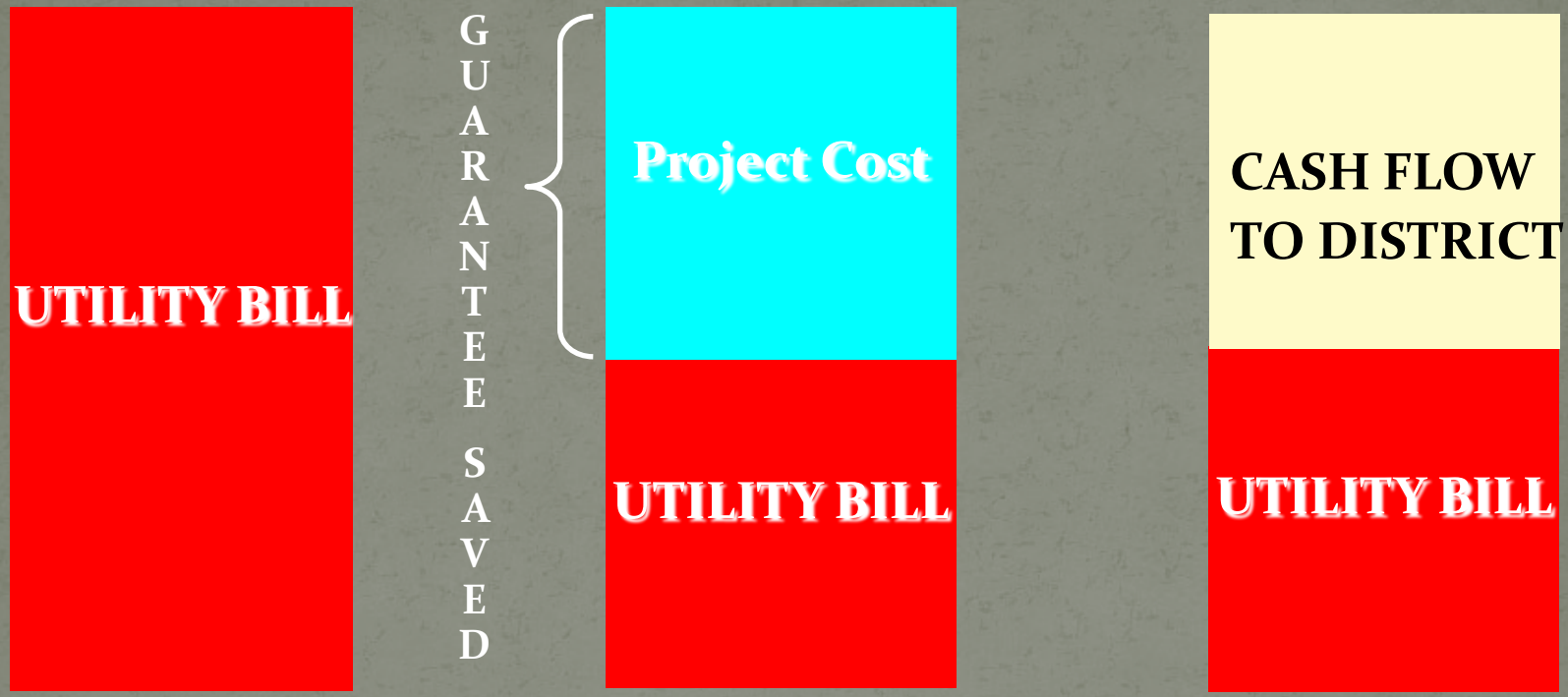
- MOA with Menominee Regional Transit
  - "Ride Free with CMN ID"
- Energy improvement measures
- Waste and Composting Planning

Investment Grade Energy Audit

FIM Name	FIM Description	Building	Budget *	Annual Utility Savings	Annual Operational Savings **	Potential Incentives ***	Net Customer Cost (with Incentives)	Simple Payback (SPB) (with Incentives)
Interior Lighting Upgrade	Perform delamping to reduce energy costs while still maintaining lighting levels. Replace existing lighting by retrofitting fluorescents fixtures with T8 lamps. Install occupancy sensors and daylight sensors in appropriate areas to reduce burn time.	Library, Shirley Daley, Campus Commons, Cultural Center, Old Main	$25,760	$5,088	$300	$1,272	$24,488	4.5
SD- Building Envelope Improvements	Seal these exterior openings with expansion foam and insulate to reduce infiltration which will help lower energy consumption.	Shirley Daley, Campus Commons, Glen Miller, Trades Center, Cultural Center, Library	$26,615	$2,708	$0	$0	$26,615	9.8
Vending Machine Controls	Install a vending 'miser' controller on the beverage vending machine(s) to suppress continous operation of the refrigeration compressor when building occupants are not using the machine(s).	Shirley Daley, Campus Commons, Glen Miller, Trades Center	$2,317	$727	$0	$360	$1,957	2.7
Boiler Replacement	Replace existing A.O. Smith boiler.	Shirley Daley	$57,333	$585	$4,000	$0	$57,333	12.5
DDC Controls Upgrade	Control ventilation based upon occupancy.	Library, Campus Commons	$28,584	$5,032	$0	$400	$28,184	5.6
Water Conservation Upgrades	Replace plumbing fixtures with low flow technology to reduce water consumption	Campus Wide	$19,869	$1,218	$100	$0	$19,869	15.1
Retrocommissioning	SYSTEMS TO BE EVALUATED: The specific systems to be reviewed under this scope of work include: Library: ☐4 ea. Air Handling Units ☐2 ea. Heat Recovery Ventilators ☐1 ea. Boilers ☐3 ea. Pumps ☐5 ea. VAV Boxes with Reheat Coils* ☐1 ea. Building Automation System	Library	$12,546	$0	$0	$0	$12,546	
Computer Power Optimization	Further optimize power consumption related to campus computer operation through the implementation of Faronics PowerSave software.	Campus Wide	$7,727	$4,048	$0	$2,400	$5,327	1.3
Residential Unit Replacement	Replace six existing residential furnace units with new high efficiency units serving the main and lower levels. A total of (5) new units to be installed for consolidation purposes. This measure would include duct cleaning of the air distribution system served by these units.	Glen Miller	$49,910	$1,396	$2,500	$750	$49,160	12.6
Dashboard System	Implementation of a dashboard system.	Campus Wide	$65,100	$0	$0	$0	$65,100	
Exterior Lighting	Replace existing pole and pathway lighting with induction technology.	Campus Wide	$69,832	$2,517	$650	$1,000	$68,832	21.7
Renewable Technology	Install 36 kW of Solar PV on south facing roofs.	Trades Building, Maintenance Building, Shirley Daley, Library, Glen Miller	$191,047	$3,205	$0	$21,820	$169,227	52.8
			$556,640	**$26,524**	**$7,550**	**$28,002**	**$528,638**	**15.5**

* Since design cost, audit cost, etc. are distributed among the FIMs, the total project cost will not go up or down by exactly the amounts shown here if a FIM or FIMs are dropped.
** For non recurring operational savings, the values are averaged over the 10 year length of this analysis.
*** Incentives are contingent on final approval and are not guaranteed. Funds are shown for reference only.

Energy Savings Concept



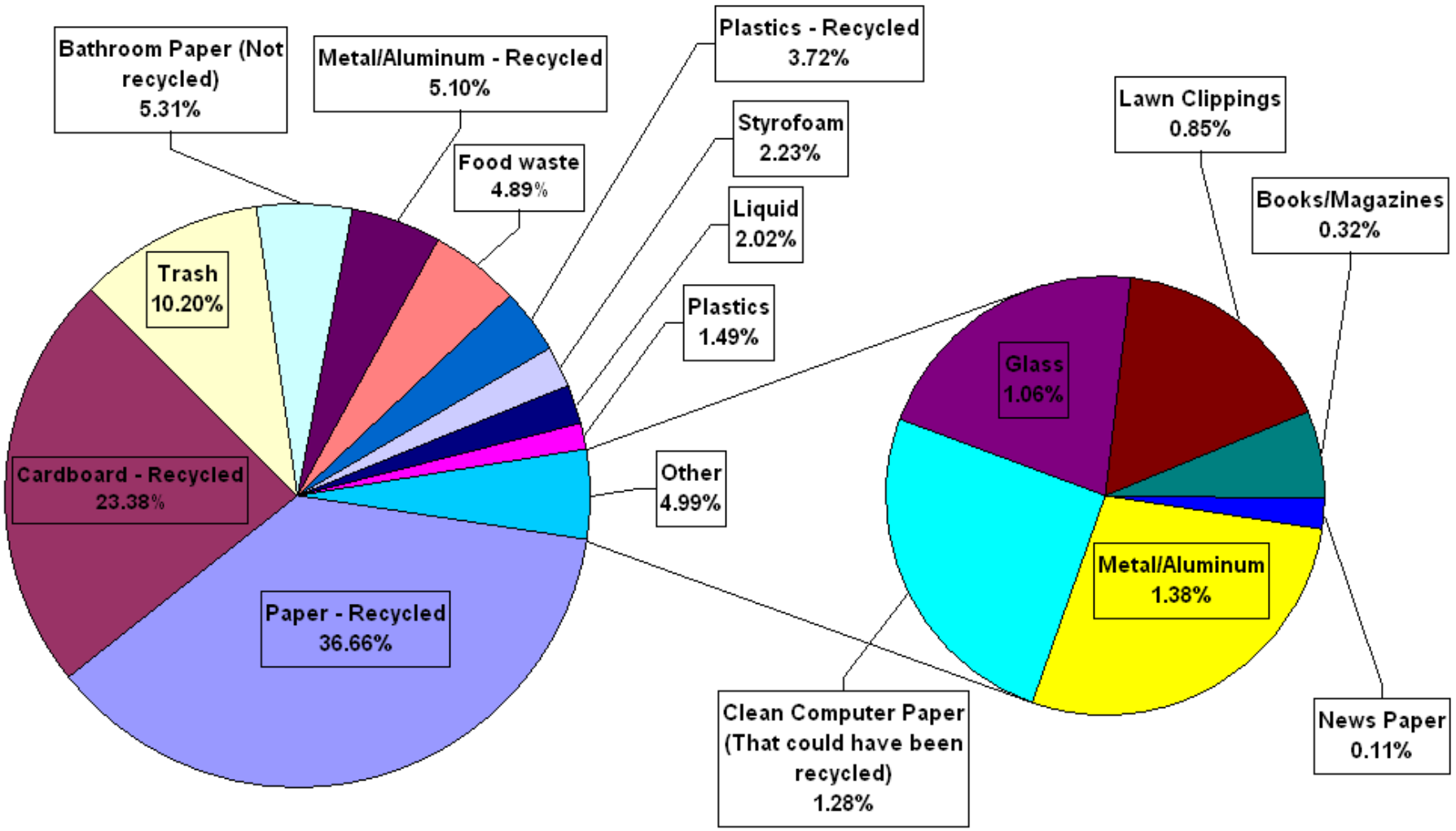
Before Implementation

During Implementation And Financing Term

After Implementation

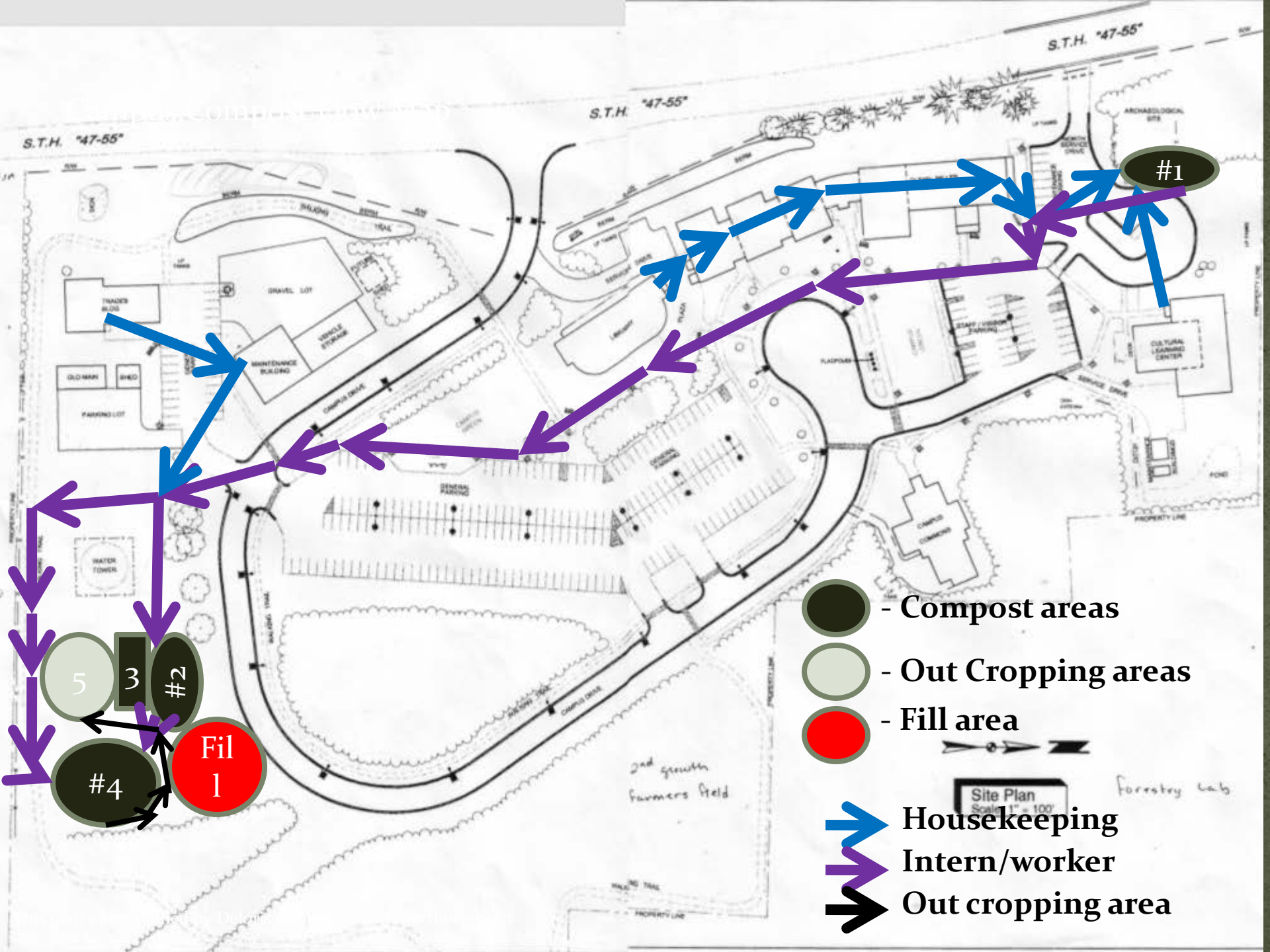
Waste Characterization Study

College of Menominee Nation
Waste Characterization Study for the Week of May 8, 2009
Weight (%)



Student Research

- Vermiculture – Worm Composting


S.T.H. "47-55"
S.T.H. "47-55"
S.T.H. "47-55"
#1
5
3
#2
#4
Fil
l
- Compost areas
- Out Cropping areas
- Fill area
Site Plan
Housekeeping
Intern/worker
Out cropping area


Area # 2
4,000 gals.
water collection system
Area # 3 Worm compost
3 bin composting
The outlined area needs fill and top soil. We will use compost for topsoil.


Out cropping or garden bed space
Out cropping or garden bed space
Fresh Greens / yard waist
Hot pile 1st compost bake
Cooling pile
Hot box Final bake
Topsoil / compost
sawdust
Finished compost
Composting area # 4 needs to be excavated to prevent site from becoming flooded. Shape landscape to work for the system. Use of materials on campus will reduce fill costs. Estimated excavating cost 400-500 dollars about ½-1 days work .

Tree Nurseries and Seedlings

College of Menominee Nation
Sustainable Development Institute

The purpose of this research was to collect and analyze information from interdisciplinary sources related to raising various species of tree seedlings for use as ornamentals or productive applications. This research will be collected over a number of years and the information and data combined will be more than likely used for future projects that extend into agro forestry and ethno botany.

Purpose

Producing quality seedlings in these nurseries is dependent upon proper coordination and execution of a sequence of steps. Seed must first be appropriately procured, processed, and sown. Seedlings must then be properly cultured during nursery growth. Following the growing season, seedlings must be effectively lifted, packed, stored, and transported. Failure to pay attention to necessary details of any of these steps may result in poor quality seedlings that limit reforestation success.

Why?

A tree nursery is for producing young trees in abundance for many purposes such as;

- Perpetuating local heritage.
- Making culturally important plants more available
- Providing employment and economic opportunities
- Propagating rare species
- Educating children to pass on traditional values

Basic Requirements for Starting a Nursery

- Land
- Climate
- Soil
- Water
- Planting Materials
- Labor

Land

Of these, land is perhaps the most important for two reasons

- You need to have enough
- Must be fertile with appropriate drainage

Many tree species are fairly forgiving when it comes to optimal soil characteristics verses crop plants.

Climate

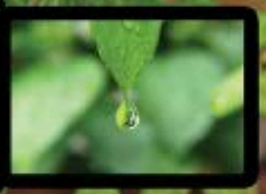
Temperatures need to be most carefully monitored and held inside the recommended range during seed germination, rooting of cuttings and graft union formation.
The temperature for optimal plant development is 35-35C. Depending on the species and the humidity, it can be slightly high, but avoid air temps above 40C.

Soil

An integral part of establishing a successful nursery is the proper soil. It is one of the leading contributing factors to the success of producing quality long living plants. The existing predominate soil type throughout the upper to lower mid-west, is Udalphs. It falls under the Udolpho Series under the udolpho serices are orders and sub-orders creating fifty-four distinct soil types.

Water

Water is the one of the most important factors in plant production. Seedlings contain over 95% water. Proper irrigation and maintenance of high humidity in the propagation environment are prime responsibilities of a nursery manager.



Labor

The number of employees you need in the nursery will depend on the size of your operation. The nursery business is inherently a seasonal activity with extended labor needs during the fall and spring.

Planting Material

As a combination of soil described previously the numerous plant materials already being produced are at a higher quality. After all, Menominee Tribal Enterprises manages the forest in a sustainable manner. Coincidentally the combination of unique soil types and environment that Menominee County has, tree restoration and reforestation is not a problem.

Presenting Author: Melissa Wilber, SDI student Intern

College of Menominee Nation
Sustainable Development Institute
N172 Highway 47/55 Phone: 800-567-2344
PO Box 1179 Fax: 715-799-5951
Keshena, WI 54135 Email: sdi@menominee.edu

Food Secure & Sovereign?

College of Menominee Nation Food Miles Data
Fall 2009

Item Group	Item Name	4th Tier	3rd Tier	2nd Teir	GB Food Miles	Keshena Food Miles
Candy Bar	Butter Finger	Glen Dale, Cali	Vending distributor Mil, Wi	Vending services Green Bay, WI	1849	1899
Candy Bar	Twix	Hacketts, NJ	Vending distributor Mil, Wi	Vending services Green Bay, WI	939	989
Candy Bar	Nutty bars	Collegedale , Ten	Vending distributor Mil, Wi	Vending services Green Bay, WI	820	870
Candy Bar	Milky way	Hacketts, NJ	Vending distributor Mil, Wi	Vending services Green Bay, WI	939	989
Candy Bar	100 Grand	Glen Dale, Cali	Vending distributor Mil, Wi	Vending services Green Bay, WI	1849	1899
Candy Bar	Babe Ruth	Glen Dale, Cali	Vending distributor Mil, Wi	Vending services Green Bay, WI	1849	1899
Candy Bar	Nature Valley	Minneapolis, Minn	Vending distributor Mil, Wi	Vending services Green Bay, WI	406	456
			Average Candy Bar Miles		**1235.86**	**1285.86**
Chips	Potato Chips		Waupaca, WI	Vending services Green Bay, WI	70	120
Chips	Sun Chips	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	Doritios	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	Fritos	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	Cheetos	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	TGI's Potato Chips	Goodyear, AZ	Vending distributor Mil, Wi	Vending services Green Bay, WI	1471	1521
Chips	Funyuns	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	Ruffles	Plano, TX	Vending distributor Mil, Wi	Vending services Green Bay, WI	951	1001
Chips	Krunchers	Hanover, Penn	Vending distributor Mil, Wi	Vending services Green Bay, WI	560	610
			Average Chips Miles		**867.44**	**917.44**
Beverages	Dr Pepper	Chicago, ILL	Green Bay, WI	Vending services Green Bay, WI	203	253
Beverages	Mt Dew	Iowa	Watertown, WI	Vending services Green Bay, WI	460	510
Beverages	7up	Chicago, ILL	Green Bay, WI	Vending services Green Bay, WI	203	253
Beverages	Crush	Chicago, ILL	Green Bay, WI	Vending services Green Bay, WI	203	253
Beverages	Fanta	Eagan, Minn	Vending distributor Mil, Wi	Vending services Green Bay, WI	303	353
Beverages	Pespi	Iowa	Watertown, Wi	Vending services Green Bay, WI	460	510
Beverages	Coke	Ashland, Wi	Vending distributor Mil, Wi	Vending services Green Bay, WI	262	312
Beverages	Vitamin Water	White Stone, NY	Vending distributor Mil, Wi	Vending services Green Bay, WI	260	310
Beverages	Lipton Tea	Iowa	Watertown, Wi	Vending services Green Bay, WI	460	510
Beverages	Dasani Spring water	Eagan, Minn	Vending distributor Mil, Wi	Vending services Green Bay, WI	303	353
Beverages	Powerade	Eagan, Minn	Vending distributor Mil, Wi	Vending services Green Bay, WI	303	353
			Average Beverage Miles		**310.91**	**360.91**
				Average total food miles for a snack consisting of chips, candybar, and beverage:	**2,414**	**2,564**

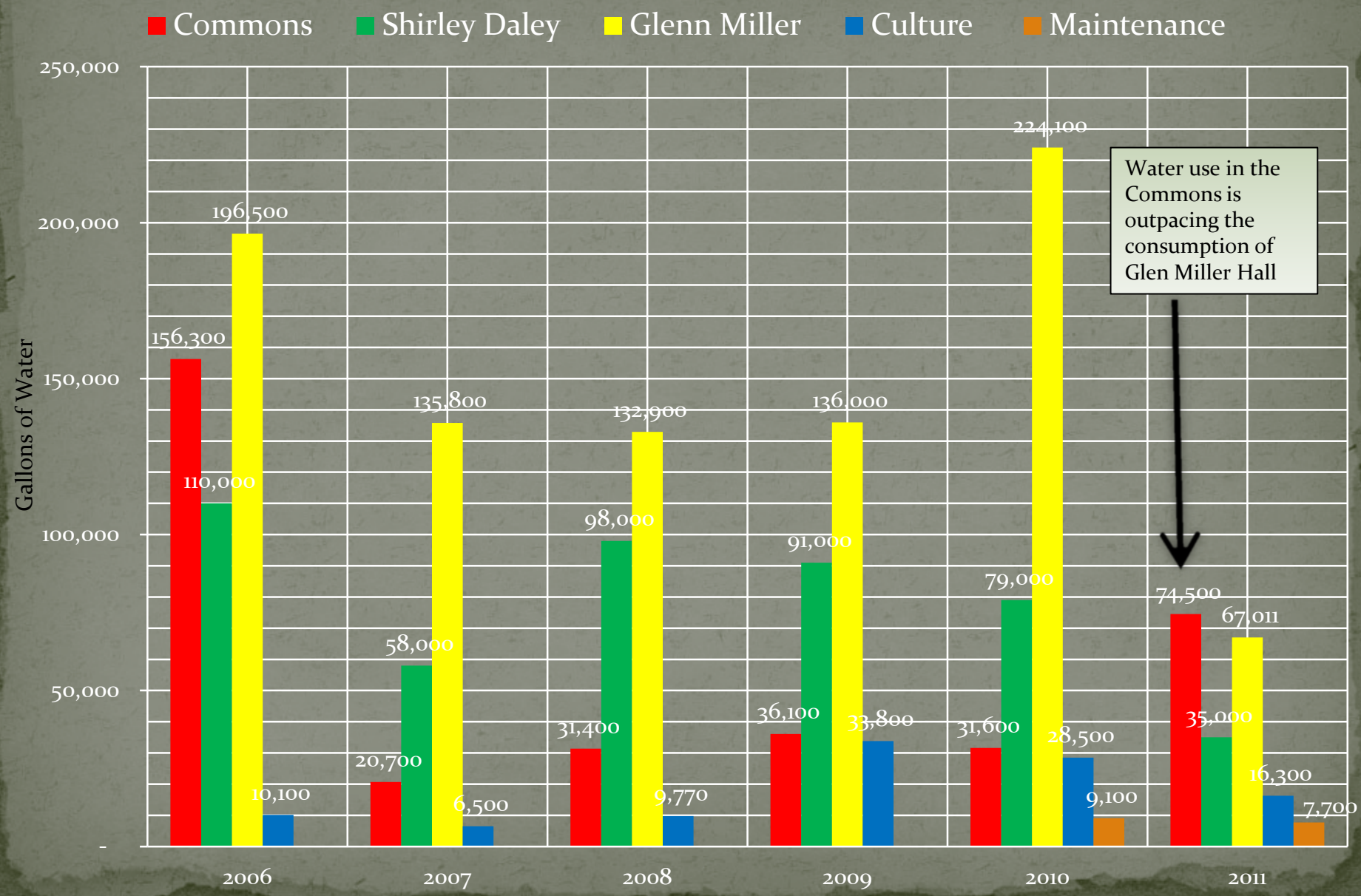
Sources

Dave Konop Owner of Konop Vending (920) 468-8517

http://www.timeanddate.com/worldclock/distance.html

Commons Water Alert

Data compile by Schyler Martin



AIHEC NREL Fellowship

- US Department of Energy
- National Renewable Energy Laboratory
- American Indian Higher Education Consortium

Cohort

- College of Menominee Nation
- Southwestern Indian Polytechnic Institute
- Haskell Indian Nations University
- Northwest Indian College
- Salish Kootenai College
- Dine College

College of Menominee Nation
Sustainable Development Institute

Thank you

Contact:
Beau Mitchell
bmitchell@menominee.edu
715-799-5600 extension 3145
www.menominee.edu
www.sustainabledevelopmentinstitute.org