University of Idaho

PREPARED BY CORE 175: EARHT AND OUR PLACE ON IT
TAUGHT BY: ED KRUMPE
SPRING 2011

UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Material Resources and Waste Disposal

1 Costs
2 E-Wastes
3 Recycling
4 Compost

Material Resources and Waste

COSTS

For many, becoming more sustainable is often seen as an expense, but that couldn't be further from the truth. Reducing waste and increasing recycling actually saves money. Therefore, becoming sustainable is not only environmentally friendly but also fiscally wise.

How Are We Doing?

The total costs of waste for the fiscal year 2010 were $297,891.39. However, with increased recycling this number may be reduced. If the University of Idaho reduces the amount of garbage going into the dumpsters and increases the amount being recycled then the dumpsters won't have to be emptied as often and will save on costs. In fact, the recycling already saves the university approximately $28,500 per fiscal year.

Did You Know?

For the year 2009-2010, the University of Idaho earned $22,000 just for recycling.

Material Resources and Waste

E-WASTE

E-waste is anything that involves electronics. This can include light bulbs, computers, batteries, cell phones, etcetera. With technology growing fast many devices become outdated quickly. Therefore our electronics are better off being recycled than in a landfill not only because it's better for the environment but it is also cost effective. The university actually receives money for recycling e-waste.

How Are We Doing?

The recycling of e-waste is a new program that the University of Idaho has started. For the fiscal year 2010, 15,921 pounds of E-waste have been diverted from waste to recycling bins. The program is becoming more efficient because the University of Idaho of Idaho has already recycled 15,600 pounds of e-waste.

Did You Know?

The University of Idaho recycles 1.4 tons of light bulbs per year.

Material Resources and Waste

RECYCLING

The University of Idaho has many different receptacles across campus to help increase recycling efforts. Almost anything can be recycled, such as old newspapers, cans, plastics, glass, wood, metal, electronics, etc. The going green trend is becoming popular and the university is incorporating it all throughout campus but we are still behind the rest of the country.

How Are We Doing?

The average recycling rate in the U.S. is about 33 % but the University of Idaho's recycling rate is only 13%. Despite the low overall recycling rate, in recent years there have been a lot of efforts to increase recycling. New programs such as the Tailgate recycling program, has produced 4 tons of recycled waste in a fiscal year. The University of Idaho recycles about 1,600 tons of solid waste per year. The main materials recycled by the University of Idaho are paper products, plastics, and food (composting).

In addition to recycling plastics and paper, the university also utilizes wood waste from sawmills from the surrounding area to heat the campus. The steam plant is both efficient and cost efficient saving the university money.

Did You Know?

Recycling one glass bottle saves enough energy to light a 100-watt bulb burning for 11 hours.

Material Resources and Waste

COMPOSTING

Composting involves breaking down wastes such as uneaten food products, plants, and other organics in order to fertilize the soil. Composting is a good way of turning what would be waste into something useful. Composting is a critical aspect of organic farming operations today.

How Are We Doing?

From 2009-2010 the University of Idaho composted 37 tons of food, 100 pounds of manure, and 20,000 pounds of leaves. Efforts to compost food are seen mainly in the commons where they have separate receptacles for recycling, composting, and landfill. Behind the scenes of Bob's, they have special food sorters sorting out what can and cannot be composted.

Did You Know?

The University of Idaho has composted 12 steer carcasses this past year.

Material Resources and Waste

ENTER"SYSTEM" NOTES

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Saul, Darrin	Sustainability Director	Composting, recycling, costs, e-waste
Sydney Hunter, Chris Merica, Justin Wolf, Joseph Mead	CORE 175 Sec 05 Students	

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UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Landscape Management

1 Land Accumulation and History and Policies
2 Pesticide Ues and Irrigation Systems
3 Landscaping Goals and Natural Area Protection
4 Signage and Current Vegitation

Landscape Management

LAND ACCUMULATION AND HISTORY AND POLICIES

How Are We Doing?

The University's land ownership started in 1890 with a 20 acre parcel under and around the Administration Building and grounds. Right now the University owns about 10,500 acres in Latah County, most of that (over 8500 acres) is in the Experimental Forest east of Moscow. The balance includes what you and I think of as "the campus", but also include what is known as the Palouse Research and Extension Center which is farm land on the perimeter of campus and south of Moscow. The University also owns land and buildings throughout the State of Idaho.

Landscape Management

PESTICIDE USE AND IRRIGATION SYSTEMS

How Are We Doing?

Because of the nature & ecosystem of the Palouse (as compared to say the University of Nebraska landscape) not much pesticide usage happens here. Most is for weed and noxious weed control in turf and for plant control along hardscapes edges, gravel areas, and planting beds. We also use some insecticide for the control of Dutch elm disease to protect the few elms we have left on campus and the iconic camperdown elms. Other than that, there are some minor outbreaks on other woody plants occasionally that may require specialty controls of some sort, for example the scale where we would use horticultural soaps or oils.

How Are We Doing?

Through our research we found out that there is no correlation between the steam plant and the campus irrigation. About 2/3rds of our irrigation system on campus uses reclaimed water though from the Wastewater treatment plant, which is a huge savings, millions of gallons, from being used out of the aquifer during the spring/summer growing season.

Impervious Surfaces versus Pervious Surfaces on campus

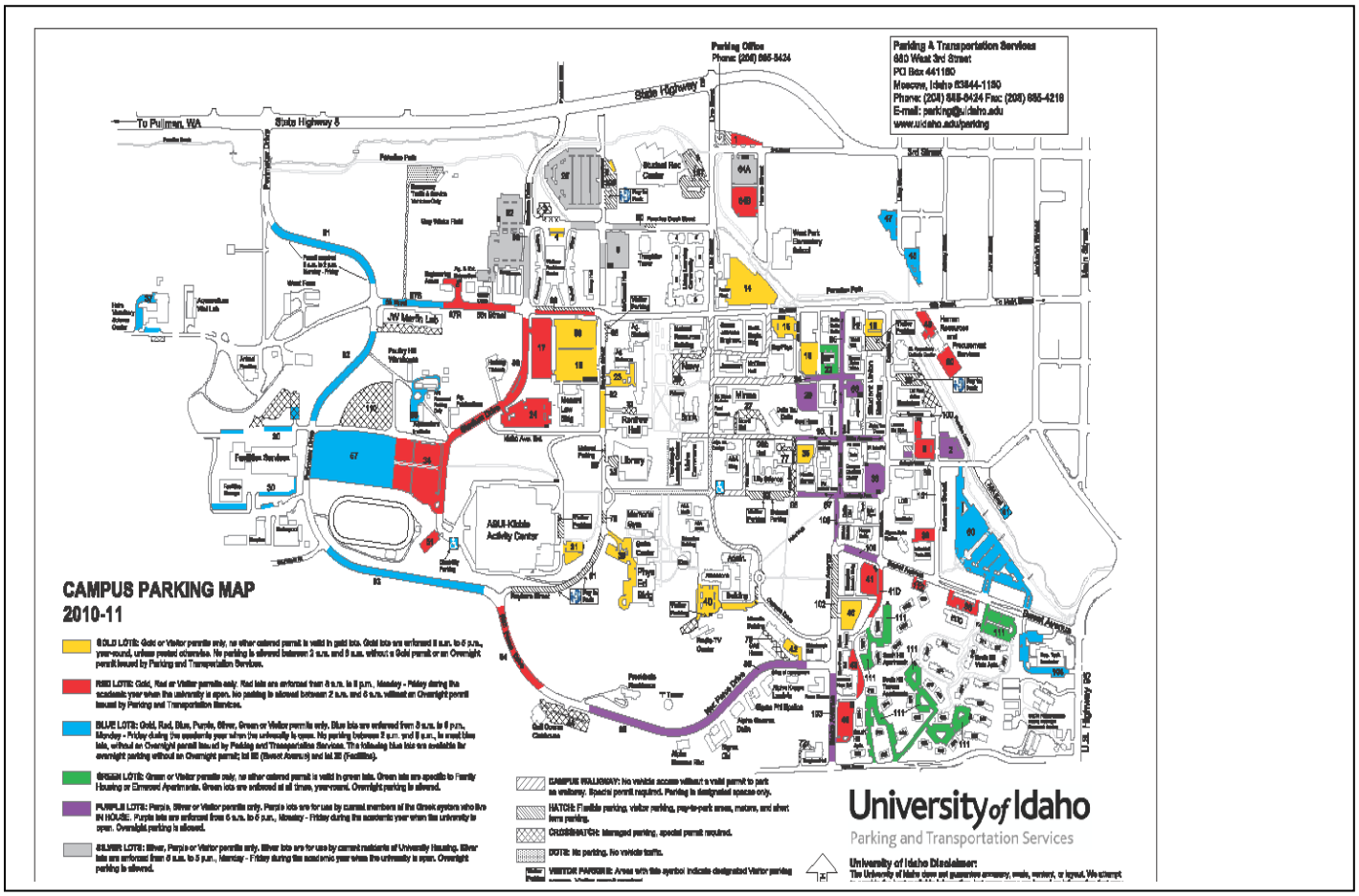
There is a total of 1,933,999.84 square feet of surface parking lots on campus (or 44.40 acres).

Pervious surface lots (gravel lots) include:

Lot 57 – 176853 square feet
Lot 35 – 11747 square feet
Lot 38 – 11113 square feet
Lot 14 – 50786 square feet
Lot 61 – 13860 square feet
Lot 110 – 50000 square feet

Total – 314359 square feet. The rest of campus parking lots are paved surfaces.

Here is a map showing the University of Idaho parking sections.



Landscape Management

LANDSCAPING GOALS AND NATURAL AREA PROTECTION

How Are We Doing?

With the never-ending and ongoing budget cuts that have happened to Facilities Maintenance & Repair budgets over the past decade, quality standards in landscape care have had to be scaled back. More fringe areas have been naturalized and focus is now only on core areas for maintenance. At the same time, UI continues to expand it landscape acreage… the property along Paradise Creek being the most recent acquisition. This means that landscape staff has to cover more acres with less resources than ever before. Right now each landscape technician has about 25 acres to maintain on campus. With further cutbacks expected, we will have to continue to cut back on amenity services and options and focus strictly on safety and required maintenance objectives.

How Are We Doing?

The Admin lawn is a protected area concerning any future development. The latest Paradise Creek sections created last year are created to be a riparian area, but that doesn't mean there is any active protection for it… just that that is the design intent for the plantings and flood mitigation efforts that happened there.

Landscape Management

SIGNAGE AND CURRENT VEGITATION

How Are We Doing?

A new signage master plan was developed over the past two years and signed off on by President Nellis several months ago. This plan will start being implemented after commencement this year, with an investment of about $200 thousand going into way finding and building signage. $200 thousand sounds like a lot, but that likely doesn't cover even 10% of the signage needing to be replaced across campus. It will be a phased effort happening over many years.

How Are We Doing?

There are construction protection standards for project work when it happens on campus. That can be found at http://www.uidaho.edu/facilities/forms. Open up the Design and Project Document Standards, and you can find the landscape and tree protection standards we use. We are always updating these to give our landscape plants a fighting chance against contractor and event damages that continually occur. Our goal is to be the best stewards we can be with the resources allocated, so that the current campus aesthetic can be used and enjoyed for decades yet to come.

Enter System

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Gerard Billington		
Carl Root		
Ray Pankolf		
David Rauk		
Charles Zillinger		

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UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

University of Idaho Water Conservation

1 Lower Water Domestic Use
2 Campus Heating System
3 Water Chilling System
4 Groundwater Pumping

Water System

LOWER DOMESTIC WATER USE

If one looks around they will see that there has been numerous efforts implemented to conserve water, ranging from low volume showerheads to automatic shut off sinks in rest rooms. Domestic water use accounts for a large percentage of annual water the University of Idaho requires. The University has been working hard to take all possible measures lowering water consumption by installing water conserving faucets and toilets in new buildings, as well as replacing old water-guzzling fixtures.

How Are We Doing?

The University of Idaho is well on its way to lowering domestic use. In the past years campus Facilities and Housing departments have been concentrating on small upgrades to water systems in the buildings, and dormitories. There have been efforts to install low flow fixtures, automatic sinks, and more efficient water use systems throughout the campus. University Housing has something very special in the works. The department has recently become the fortunate recipient of a special grant that has given them the opportunity to install over a half a dozen uniquely designed low flow toilets with a partial or full flush feature. This special feature allows for a half of a flush for liquid waste while still providing a full flush for solid waste. This measure alone will save hundreds considering that a traditional toilet usage is 20 gallons a day per person, where as these select flush toilets will only utilize about five gallons per person. That's a significant difference. But because these toilets have recently been installed it is hard to say just how much savings these toilets will produce, but the future is looking bright. Under the current budget restrictions it has faced, the University of Idaho has still made significant efforts to improve the situation in regards to domestic water waste on campus. With the installations of water saving fixtures combined with the efforts to make people more conscientious of their water consumption, the University of Idaho over the years has taken their average total water consumption from 314 gallons per year down to 250 gallons per year. And even though that's a lot, the University of Idaho would like to make that even less. So, until the U of I has exhausted every avenue of conserving water it will continue to strive for optimal water conservation. Unfortunately, that is all dependent on funding. From our understanding, there are no long term projects that are directly focusing on lowering domestic use specifically.

Water System

LOWER DOMESTIC WATER USE

Recent Accomplishments

The Idaho Commons and TLC building, upon its completion in 2005, was the first new building on campus to have low flow fixtures installed throughout the building. Joe Kline, of the Facilities Management Center, shared how the university could conserve even more water. He expressed that although they would like to, at the very least, switch out all of the present water fixtures with low flow ones, the current funding leaves them unable to do so. However he happily stated that they do have available funds for the purchase of low volume fixtures when a current older one malfunctions and needs replaced. In other words, it is a slow process, but the university is inching its way toward being more efficient when it comes to water. Mr. Kline also stated that they had been experimenting with automatic sinks and toilets that respond with human movement, within the Facilities building. And not the automatic ones that requires batteries, but rather the ones that are directly hardwired because battery operated fixtures are not as efficient. Facilities found the hardwired automatic's to be highly economical, but that the fixtures were still in the testing phase to determine reliability.

Comparing our Performance

So we know that the University of Idaho has taken steps to reduce their water consumption on campus by means of domestic use by the installation of water saving toilets, faucets and showerheads, but how do they compare to efforts at other universities, say perhaps Idaho State University? Well, upon evaluation of ISU's water conservation efforts they make claim that their installations of low volume water devices such as sinks and toilets have saved the university well over 24.5 million gallons of water per year and an annual cost savings of around $79,000. And while it has been estimated that the University of Idaho has saved well over these amounts of ISU per year as a result of water conservation efforts, no clear statistical data could be confirmed at this time. But efforts are underway to provide declarative numbers in the future.

Water System

CAMPUS HEATING

The University of Idaho Steam Plant uses a very efficient system of heating and cooling campus using steam produced by the burning of woodchips. This steam plant has been the primary source of heat production for over 100 years. Once operating primarily on coal and natural gas, in 1986 the wood-fired boiler was added to the plant and is now responsible for the majority of the plant's steam production year round.

How Are We Doing?

Biomass energy production is not only economically beneficial; it is also a very sustainable, low-waste alternative to natural gas. The woodchips that are used to heat the University of Idaho are purchased from local mills, providing a cheap and reliable source of energy. Burning woodchips is a great way to reduce CO2 emissions, and the plant has a very efficient condensate return. The steam produced by burning the woodchips is sent out through a series of pipes to all of the buildings on campus. Once the steam looses heat, that is captured and utilized as heat for the buildings, it cools and returns to the plant as condensate. The plant is located downhill in respect to the major buildings, so the returning condensate flows back to the plant in a more natural way. Heating and cooling water does produce an average loss of returning condensate. However, the University of Idaho Steam Plant only loses an average of about 10% of condensate. The other 90% that is collected is reused, saving water and reducing waste.

Did You Know?

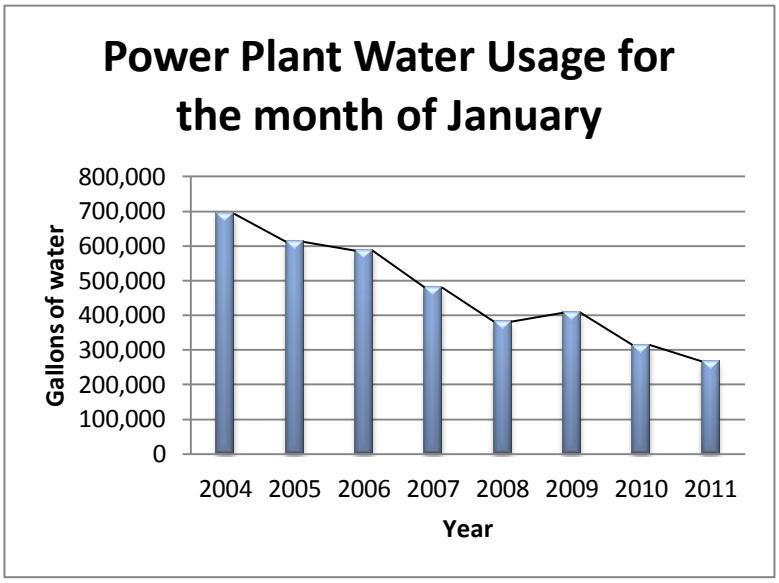
The UI Steam Plant used 266,550 Gallons of water in January 2011 to heat 70% of the building on the UI campus

Water System

CAMPUS HEATING

Recent Accomplishments

- The steam plant is currently able to provide heat to around 70% of the buildings on campus.
- The amount of water that the UI Steam Plant uses to heat campus varies month to month, but the overall number of gallons per year has been decreasing since 2003.
- In January of 2004 the Plant used a total of 692,355 gallons of water. In January 2011 that number was more than halved, when the UI Steam Plant only used 266,550 gallons.
- This decrease has been the result of increased knowledge of the system along with repairs to piping that is responsible for the delivery of steam to campus buildings and carrying the returning condensate back to the plant.



Our team created this graph using the data given to our group by Mike Lyngholm, the UI Steam Plant manager. This graph demonstrates the total amount of water used in the month of January for each year from 2004 to 2011. As you can see the water usage is down significantly from just 2004.

Water System

WATER CHILLING

The University of Idaho holds a unique system for water chilling. There is a 90 foot container placed near the University golf course on Perimeter Drive that can hold up to two million gallons of chilled water. The water chilling system is unique to the campus as it is the first of its kind. With the two existing centralized water chilling systems, the campus will be able to provide for more efficient air conditioning in the years to come. A new chilling plant has been created directly attached to the new water chilling container.

How Are We Doing?

Upon interviewing a project manager for CTA Architects Engineers, the firm in charge of creating this new water chilling plant, I was startled to discover that the new plant could cut the amount of money spent on cooling at the University by up to 30%. Facilities stated that the money saved through this newer more efficient system will be used to make upgrades to existing systems onsite. The newly added plant has all of the newest technologies involved with water chilling integrated and are reported to be operating at maximum efficiency.

Efficiently cooling the water used to air condition the U of I campus has always been a struggle due to the water chilling system in effect. With the addition of the new structure, efficiently cooling the campus will be a BREEZE. Students can help cut cooling costs by opening windows and purchasing small portable fans.

Water System

WATER CHILLING

UI Water Chilling Facts:

-As of fall 2010, the University has implemented the third water chilling facility into the other two existing systems.

-Electric centrifugal chillers and steam absorption chillers that utilize steam to generate cold water provide for a majority of the campus uses.

-For the near future, the U of I is planning to decommission existing water chilling plants as newer technology arrives. Some of the existing plants may be modified to bring in the new changes in efficiency.

-On a peak load day (95 degrees temperature with a minimum amount of 35% humidity), the system can easily operate with little to no hiccup in cooling.

-The project to create the third water container began in 2008

-The project to create the third water container began in 2008

-The Water Chilling system was introduced with little to no improvement in the last 10 years; the addition of the newest water chilling plant was completed in the fall of 2010.

-The old system of water chilling operated in a moderate amount of efficiency, while introducing the third helped curb overload and evenly distribute the workload.

-The primary refrigerant used is water, which creates an enormous amount of positive impact on the environment as almost no harsh chemicals are used in the chilling plants themselves

Did You Know?

The University has 3 plants responsible for air conditioning.

Water System

GROUND WATER PUMPING

In recent years the University of Idaho has been working hard to reduce and reuse water on campus. With more efficient heating and cooling systems, we have significantly lowered our use in the last decade. According to the Palouse Basin Aquifer Committee meeting on Feb 17, 2011 the Palouse region (including Moscow, Pullman, UI, WSU, Colfax and Palouse) pumped a total of 2.5 Billion gallons of water from aquifers in 2010. This total number of gallons pumped includes all uses, and is 6% less than what was used in 2009, and 18% less than 1992. These numbers go to show that even with a growing school and city, the Palouse region has been working hard to bring water use down.

How Are We Doing?

According to the Water Use Report put out annually by the Palouse Basin Aquifer Committee (PBAC), the University of Idaho has decreased in the amount of gallons pumped out of the Palouse regional aquifers. There is little information concerning the causes of this decrease in the report, but there is a lot of evidence that proves we have been using less over the years. In 2006 the UI Domestic use was estimated at 8% using 220 million gallons. There was a 1% decrease by 2009, corresponding to a decrease in an estimated 40 million gallons.

When comparing the amount of water used by the University of Idaho to WSU there is evidence that the UI campus has been more successful. UI decreased in the three years between 2006 and 2009, while the WSU campus experienced an increase in total percentage and millions of gallons pumped annually. WSU was responsible for 479 million gallons of groundwater in 2009, corresponding to a 1% total increase from 2006 landing the campus at a total of 18% of the regions groundwater.

These numbers come from figures that are used in every yearly report; they are reliable, but may be misleading. The way to accurately measure the Universities success in lowering water usage would need to include annual precipitation and per capita consumption. If there is more precipitation one year, the annual use will decrease due to a lesser need for irrigation water. Similarly, if there are hypothetically 50% less residents and only 40% less water use it can be assumed that per capita consumption has increased and therefore not succeeded in using less water. Ultimately, the PBAC and the Palouse region have been working on decreasing water use in the hopes of creating a more sustainable water use system.

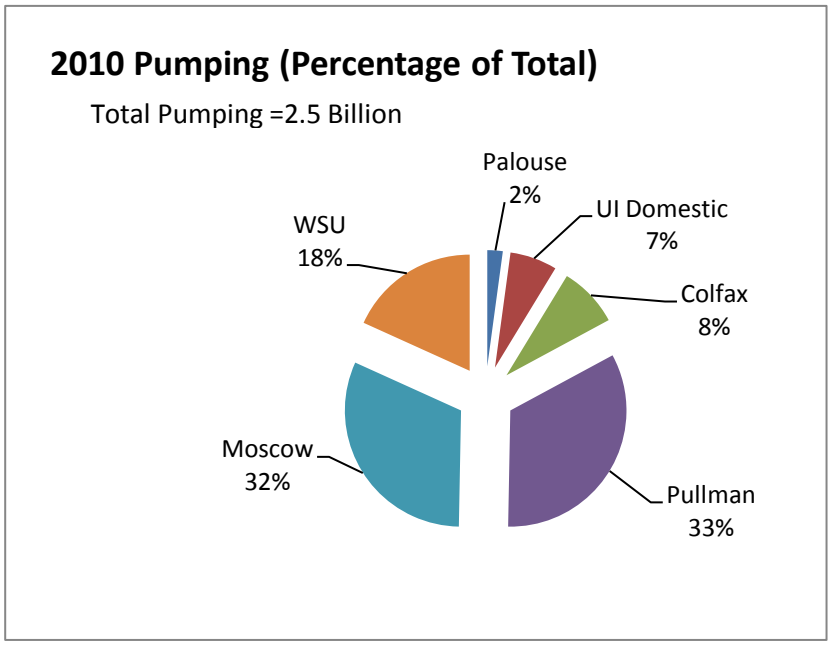
Did You Know?

The Palouse Basin Aquifer Committee estimated that the average student used 130 gallons of water every day during the year 2007.

GROUND WATER PUMPING

This chart contains data that was found on the PABC website. Using the information presented in the power point link for the 2010 Pumping and Water Levels PBAC Meeting on February 17, 2011.

As shown here the University of Idaho was responsible for an estimated 7% of pumping in 2010. The PBAC releases an annual water usage report. The 2010 report is yet to be released publicly, but you can look for the data on the offical PBAC website by following this link:
http://www.webs.uidaho.edu/pbac/



Water System

THANK YOU TO ALL OF THE UNIVERSITY STAFF AND FRIENDS THAT CONTRIBUTED

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Joe Kline	UI Director of Facilities Utilities and Engineering	All Indicators
Mike Holthaus	UI Water Systems Manager	All Indicators
Mike Lyngholm	UI Steam Plant Manager	Campus Heating
Mike Neelon	Assistant Director of University Housing	Domestic Use
Facilities Page	To educate students	Water Chilling/Domestic Use
CTA Architects Engineers	N/A	Water Chilling

REFERENCE LINKS

1. 2006 Annual Water Use Report
2. 2009 Annual Water Use Report
3. 2010 Pumping and Water Levels
4. PBAC Fact Sheet
5. Mission Statement
6. http://www.webs.uidaho.edu/pbac/
7. http://www.isu.edu/magazine/winter09/conservation.shtml
8. http://www.uidaho.edu/sustainability/news/
9. University of Idaho Power Plant Water Usage spread sheet provided by Mike Lyngholm
10. Steam Plant at University of Idaho information packet provided by Mike Lyngholm

Information in this document was compiled by University of Idaho students: Michaela Brinkmeyer, Kristina Moore, and Justin Fischer.

University of Idaho

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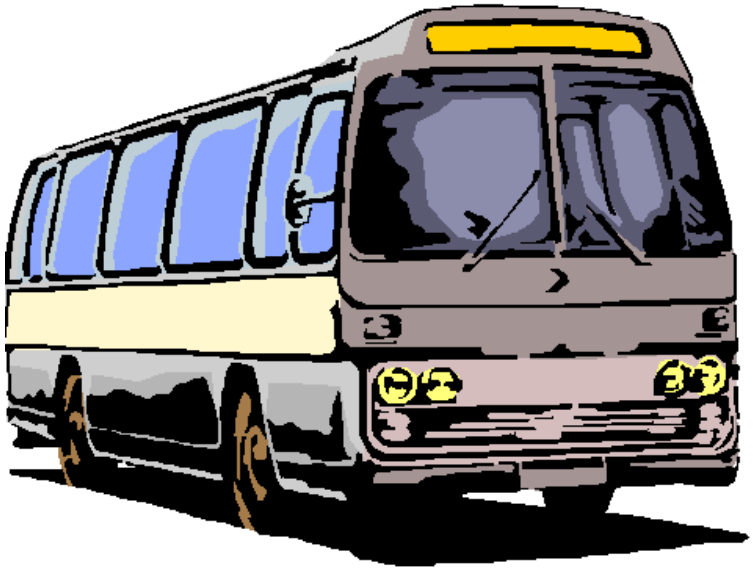
UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Transportation

Trends in Transportation

"Public transportation trends are changing…and on the cusp of changing more dramatically when gas prices increase even higher. People are going to have a harder time being able to afford personal mobility, particularly in rural areas. The mobility needs of our citizens is going to be a challenge. Elderly and disabled who rely on public transportation are the biggest concern. Providing public transportation in rural areas, as I said earlier, for much of Idaho, are an even greater challenge. Regional transportation is likely to be motor-coaches until such time as rail becomes more cost-effective. I have no idea if and or when that would occur. Carpooling, vanpools, public transit, volunteer drivers providing mobility to elderly and disabled….are all working to some extent now. It all depends on Federal, State and local funding. Private funding is going to have to be sought out. Walking, as a local option is always a good one. Bicycle use will increase in communities and on college campuses. Transit is a crucial option but one that relies on funding subsidies."

-Carl Root, Director of University of Idaho Parking and Transportation Services



How often do University of Idaho students use Public Transportaiton?

21% Never use
1% Always
66% Sometimes

Student and Faculty Trends

CAMPUS TRANSPORTATION

Approximately **40%** of students and staff/faculty live on campus

- 100% walk on campus
- 32% will also ride bicycles

Approximately **60%** of students and staff/faculty live off campus

- 32% will commute to campus by bike
- 68% will commute by car
- 89% who park off campus will walk from parking spot to campus

How can we increase use in public transportation?

We can make public transportation more available to students, staff, and faculty.

78.4% of questioned individuals admitted they would seriously consider using public transportation for their commuting needs it were more readily available.

We can increase awareness.

Only 92.2% of individuals are aware of the bus service between Moscow and Pullman.

Only 54.7% of individuals are aware of the bus service between Moscow and Lewiston.

Only 90.1% of individuals are aware of the bus service in Moscow.

Did You Know?

The University of Idaho campus parking lots total to just over 44 acres

Automobile Transportation

AUTOMOBLIE TRENDS

Type of Automobile Used

68% of students, faculty, and staff travel to campus and to other destinations on the Palouse by automobile. A survey by the U of I Sustainability department and students concluded which vehicles were most common.

17%-SUV
5%-Minivan
16%-Pickup
7%-Full-size
22%-Midsize
31%-Compact
2%-Motorcycle or Scooter

Only 7% of surveyed individuals' automobiles can also be classified as hybrid or fuel-economy.

83% of students,faculty, and staff own a UI parking permit.

The Univeristy of Idaho Parking and Transportation Department reported sales in 2010 of just over 6,000 annual parking permits and 5,000 daily visitor permits.

Reasons for Personal Automobile Transportation

Students, faculty, and staff choose to travel by automobile for a variety of reasons.

22% of those individuals do not live in Moscow city limits which corresponds to the **22%** who choose to travel by car due to distance from campus

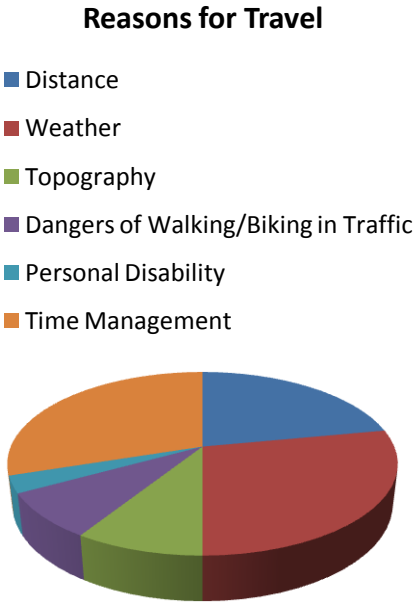
28% commute to car due to weather conditions

9% commute due to Topography of route

8% are worried of the dangers of traffic

3% have Personal Disabilities

30% use automobiles for Time Management reasons



Alternate Transportation

TRENDS IN ALTERNATE TRANSPORTATION

On Campus

WHICH MODE OF ALTERNATE TRANSPORTATION IS MOST COMMON?

When asked what mode of transportation they would use to travel to campus without the use of their personal vehicle the results were:

- **33%-Bicycle**
- **23%-Walking**
- **17%-Carpooling**
- **26%-Bus Service**

As bicycling is the most common form of alternate transportation to, from, and on campus, aside from walking, we have examined the availability and safety of bike services on campus.

There are:

- **120 bicycle rack locations**
  - **2-3 covered**
- **2 bike air stations**
  - **Commons and UI Steam plant**
- **Bike lane on 6th Street from Line to Deakin Avenue**

Based off of bike lane condition, pavement smoothness, and shoulder width **93%** of bicycle riders feel safe.

To Place of Permanent Residence

WHICH METHOD OF TRANSPORTATION DO STUDENTS USE TO TRAVEL HOME?

Distance is a key factor when students determine the most cost effective and fuel efficient method to travel home.

106 students were surveyed to find the distance from the University of Idaho campus to their place of permanent residence.

7% live 10-50 miles away
16% live 50-100 miles away
56% live 250-500 miles away
15% live 500-1000 miles away
5% live over 1000 away

The same students were asked which method of transportation they used to travel home.

48% Drive or Carpool

However, 52% of travelers use an alternate mode of transportation.

38% Travel by Plane
14% Travel by Public Transportation

Frequency of Transportation

FREQUENCY

Students, Faculty, and Staff travel to and from campus during the day and travel back and forth from their permanent place of residence throughout the year.

On average, those who travel to and from campus daily make less than 2 trips

Those who travel to and from campus daily drive an average of 4 miles or less

Students that do not permanently live in Moscow or the surrounding areas make an average of 3 trips home throughout the year

How Are We Doing?

Students, Faculty, and Staff are traveling to and from campus multiple times per day and only a small portion of the general population utilizes alternative forms of transportation or owns a hybrid or fuel-efficient automobile.

Surveyed individuals expressed their need for improvements on the UI campus in terms of alternate transportation.

As gas prices continue to climb , the number of those using public transportation increases.

Students would like to see more covered bicycle racks. 35% of bicycle riders still travel in rain and snow.

Specific improvements for the Moscow Bus Service were surveyed:

20%-Want stops more convenient to residence

29%-Want Evening Service*

19%-Want more covered bus shelters

21%-Want more frequent bus stops**

11%-Want Weekend Service

With these improvements to the current UI and Moscow Public Transportation systems we can increase interest and hopefully usage of these systems.

By decreasing our use of gasoline-guzzling automobiles and increasing our use of alternate transportation we can greatly reduce the University of Idaho carbon footprint.

* -Current Service stops at 5 pm
**-Current Service stops Twice per hour

Did You Know?

For fiscal year 2008, revenues collected by the Moscow Police Department for parking fines and vehicle boots totaled $155,351.63

What Options Are There?

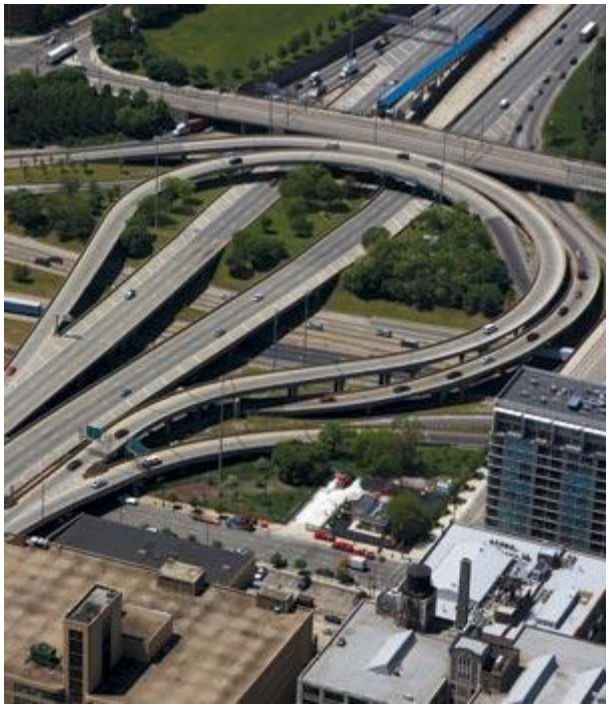
ALTERNATE TRANSPORTATION OPTIONS

Public Transportation Options for Students, Staff, and Faculty

- Transit service within the city and connecting to the University of Idaho campus is provided by Moscow Valley Transit
- Inter-campus transportation between the University of Idaho and Washington State University is provided by Wheatland Express
- On-campus transportation for individuals with disabilities is provided by the Vandal Access Shuttle
- Regional transportation service (Boise, Coeur d'Alene) is provided by Northwestern Trailways
- A vanpool program is provided through the City of Moscow

Other alternative transportation options include:

- Zimride - a private ridesharing network for affiliates of the University of Idaho
- Palouse Rideshare - a ridesharing program for non-University of Idaho affiliates
- Holiday Break Bus - provides students rides to destinations in Idaho, Oregon, and Washington for academic breaks (fall, winter, and spring break)



Transportation

TRANSPORTATION NOTES

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Carl Root	Director of UI Parking and Transportation Services	Trends in Transportation
Darin Saul	Sustainability Coordinator	Overall Guidance

REFERENCES

1. Daniel Jewel
2. Grady Shalz
3. Rebecca Capione
4. Kyle Ray
5. Beth Whitfield
6. Amanda Wilder

Statistical Information was collected from two surveys:

1) Survey done by Daniel, Grady, Rebecca, Kyle, Beth and Amanda in March/April 2011
2) Survey done by Sustainability Center in 2008

University of Idaho

PREPARED BY CORE 175: EARTH AND OUR PLACE ON IT
TAUGHT BY: ED KRUMPE
SPRING 2011

UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Purchasing

Purchasing

PAPER PURCHASING

In a general sustainability assessment of the Purchasing department our committee has compiled some interesting data for consideration. First some background information, according to policy, various departments on campus can purchase up to $5000 without the Purchasing office being involved. It is focused on the larger scale buying. The fiscal year runs from July 1st to June 30th and each department receives X amount of dollars to spend for the year. There is a cap on the purchasing card of $20,000 per month but as many purchases can be recorded as needed within the limits.

How Are We Doing?

Green Purchasing

The exact figures for percentage of departments employing sustainability guidelines in all purchasing decisions are unknown to a degree, since purchasing sector runs as a decentralized office. When departments are for instance buying paper, as long as it is under $5000, there is no control over what kind of paper is purchased. The purchasing office sent out free reams of paper across campus ranging from 30-50% post-consumer. The paper is around the same prices as virgin paper. The head purchasing office has estimated that at least 70% of departments are purchasing at least 30% recycled paper. In a survey conducted across campus for purchasing departments with 41 respondents, 47.2% used 30% post-consumer paper, 5.6% used 50% post-consumer paper, and 16.7% used 100% post-consumer paper. This amounted to 69.5% of the departments participating in the survey using some form of post-consumer paper.

The University of Idaho has a contract with Office Max, but departments do buy paper from other sources such as Costco, Staples, and Office Depot.

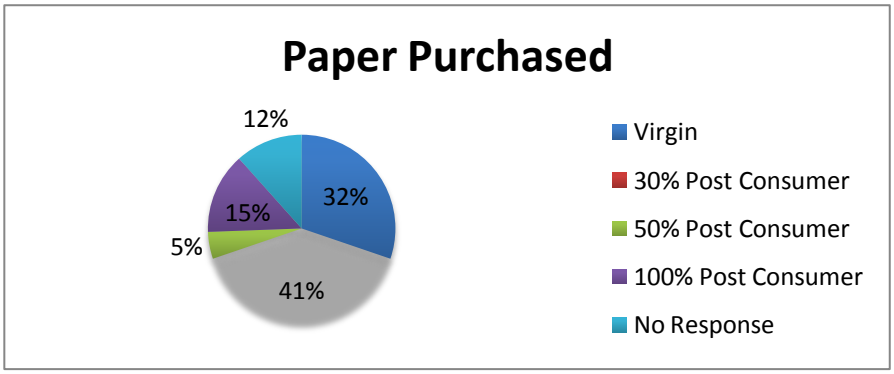
We thought the following date regarding the number of reams of paper purchased amongst departments per month might be of interest:

Mean: 11 Reams
Median: 7 reams
Mode: 10 reams
Range: 2-90 reams

Concerns of Departments

-Cost-effective vs. virgin paper
-Recycled paper doesn't run through some printers well
-Balance between "green" and expense
-Don't like the noting of enforcing anything

Our assessment is that the paper purchasing results are an indicator there is certainly room for improvement on campus in utilizing green paper purchasing. It seems viable to consider centralized purchasing of such bulk items as printer paper in an effort to go greener and save the university money.



Did You Know?

The U.S. consumption of paper and paperboard in 1999 was approximately 354 kilograms (about 800 pounds) per person[1]

Water System

PAPER PURCHASING

Recent Accomplishments

Nearly 75% of paper used on campus is post-consumer paper.

Comparing our Performance

Arizona State University has similar guidelines on purchasing of paper. Their policy on paper from their green purchasing policy is:

"Thirty per cent postconsumer waste recycled paper for all applications shall be the standard when quality of service is not compromised nor the health and safety of employees prejudiced."[3]

Opportunities

NEXT FEW YEARS

Our assessment is that the paper purchasing results are an indicator there is certainly room for improvement on campus in utilizing green paper purchasing. It seems viable to consider centralized purchasing of such bulk items as printer paper in an effort to go greener and save the university money.

Purchasing

REUSING/RECYCLING PAPER

Recycling and Reusing is a huge part of purchasing sustainability. The more the departments reuse, the lesser the need is to buy. Not printing unless it is necessary and reusing paper whenever possible will save the university money and produce less waste.
Recycling paper instead of throwing it away reduces trash flow to landfills. This is important if we are to become more sustainable.

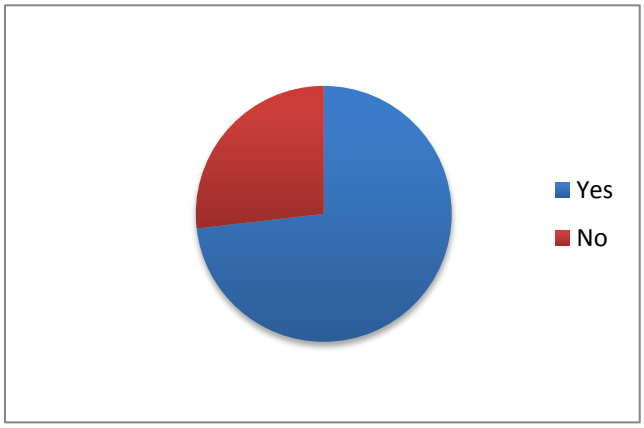
How Are We Doing?

Almost 75% of the departments we surveyed said they reuse paper. That is a good majority and shows that we are on our way to sustainability.

More than 60% buy paper that is at least 30% recycled.

As far as paper consumption goes, departments range greatly in their use of paper. The number of reams of paper used per month varies from anything from 3 to 90. Paper consumption depends greatly on the department, and their need for printing paper.

Does Your University of Idaho Department Reuse Paper?



Did You Know?

Recycling one ton of paper saves about 17 trees

Purchasing

RECYCLING/REUSING PAPER

Recent Accomplishments

This entire sustainability audit is a great first step. It shows that our university is taking the issue seriously. Many students and staff are involved in this. This will bring awareness to the sustainability of our school. Hopefully even by taking this survey, many of the department purchasing heads rethought how they get their paper. Many of our departments reuse paper and buy paper that is at least partly made from post consumer waste. We got responses from 41 departments, showing that staff/faculty at this university are willing to work towards sustainability.

Comparing our Performance

While it appears that University of Idaho is doing pretty well in the recycling and re-using paper department, there is room for improvement. Other universities have more readily accessibly paper-recycling programs. One such university is Iowa State University$_2$. Their recycling program is better advertised, thus more utilized. Iowa State University recycles over 10 tons of white paper a month. Iowa State also has a full website devoted to their recycling program on campus: http://www.fpm.iastate.edu/recycling/default.as

Purchasing

RECYCLING/REUSING PAPER

Opportunities

NEXT FEW YEARS

There are many things we can do over the next few years to have a better system when it comes to recycling and reusing.
People will recycle when it is convenient so we need a larger system of recycling bins in all the departments and all around campus.

When recycling bins are readily available, people will recycle more. With more bins, all the departments will be able to recycle all their department paper waste.
Many departments say they do not buy the recycled paper because it is more expensive than the "virgin" paper. To get more departments to purchase recycled paper, the University could find a paper contractor that is willing to work with the University and move in the "green" direction.

Most departments already reuse their paper but we could send emails to all the departments in the school detailing all the simple and easy ways to reuse paper.

Opportunities

LONG TERM

Ultimately, we need to look at having purchasing regulations to keep this campus sustainable.

We also need regulations on paper purchasing. In the future, we need to find a distributor with good prices on paper made from post-consumer waste.

Other opportunities include getting faculty, staff, and student feedback on recycling efforts. Feedback is essential to seeing what works and what does not work.

Purchasing

CAMPUS ATTITUDE TOWARDS GREEN PURCHASING

In general, policies on campus and initiatives do not come to existence without the support of those on campus. Faculty and staff members play an influential role in general attitudes on campus. In order to get a sense of the campus attitude towards "green" purchasing, those in charge of purchasing for each campus department were asked to complete an online survey that looked into general attitudes and practices in regards to green purchasing.

How Are We Doing?

In general, the campus attitude towards green purchasing policies is conditionally supportive. The majority of respondents felt that green purchasing was a good idea, but most were conflicted with fiscal responsibility and ecological responsibility. Due to budget cuts, many departments said they did not have the funding to be worried about making sure all their purchases, especially in regards to paper purchases, were "green".

Did You Know?

U.S. contribution of global greenhouse gas emissions: about 20 percent

Purchasing

CAMPUS ATTITUDE TOWARDS GREEN PURCHASING

Opportunities

NEXT FEW YEARS

- Host workshops/seminars that show the benefits of green purchasing
- Provide faculty/staff/students with reading materials that explain green purchasing and the benefits associated with green purchasing

Opportunities

LONG TERM

- Host workshops/seminars that show the benefits of green purchasing
- Provide faculty/staff/students with reading materials that explain green purchasing and the benefits associated with green purchasing

Purchasing

UNIVERSITY POLICY ON GREEN PURCHASING

Green purchasing can be more expensive than the traditional purchasing that requires little to no consideration to how it will affect the environment. The University of Idaho is pushing to become a more 'green' university, but also has to make sure they are able to fit it in their yearly budget. Campus policies regarding green purchasing do encourage departments to take the Earth's resources into consideration while making purchases, but at the same time aren't too strict in order to match the needs of many departments that simply could not operate as efficiently on green products.

How Are We Doing?

Over the years, UI has been making great efforts to becor a more green university. By making deals with suppliers t reduce cost on green products, and enforcing recycling more, UI is heading in the right direction to becoming greener!

Did You Know?

Combined percentage of U.S. greenhouse gas emissions generated by commercial buildings (17 percent) and industrial facilities (28 percent): 45 percent.

Purchasing

UNIVERSITY POLICY ON GREEN PURCHASING

Recent Accomplishments

Orders for paper that go through the purchasing office must be at least 30% post consumer paper

The University has a contract with Office Max which means the cost of being greener is becoming less expensive for everyone to use.

Cleaning departments have been using greener cleaning supplies that don't harm the environment as much.

Comparing our Performance

While the University of Idaho is making great strides towards becoming a "greener" more "sustainable" campus, other universities have already implemented more comprehensive green purchasing policies. One example of a clear and readily accessible policy and attitude towards green purchasing is that of Rutgers University. Rutgers University has a full website devoted to their efforts towards creating a green, sustainable campus.

Purchasing

UNIVERSITY'S FUTURE IN GREEN PURCHASING

The Sustainability Center at the University offers great hope towards the University of Idaho having a "green" and sustainable campus. Change happens when people take the time to explain and advocate for it.

How Are We Doing?

The future of green purchasing at the University of Idaho is bright. While current purchasing guidelines are more of just friendly suggestions, it appears that the Sustainability Center is doing its work to have a campus that purchases in a more "eco-friendly" way.

Did You Know?

Amount of greenhouse gas emissions that would be reduced if the energy efficiency of commercial and industrial buildings improved by 10 percent: equal to about 30 million vehicles.

Purchasing

UNIVERSITY'S FUTURE IN GREEN PURCHASING

Recent Accomplishments

While the University is still working on having more comprehensive purchasing regulations, they have made great strides.

While it is not necessarily a tangible "accomplishment", the completion of a survey of purchasing habits is a step towards great green purchasing requirements. The overall opinion on green purchasing was positive—the university just needs to find a way to make it possible financially.

Comparing our Performance

As said in the section that covered the attitudes towards green purchasing, other universities have passed the University of Idaho in green purchasing guidelines/regulations. Rutgers University has a pretty comprehensive plan for purchasing guidelines. Arizona State University[4] is another university that shows a sustainable initiative in their purchasing practices. This link takes one to the purchasing policy at ASU: http://www.asu.edu/aad/manuals/pur/pur210.html

Purchasing

UNIVERSITY'S FUTURE IN GREEN PURCHASING

Opportunities

NEXT FEW YEARS

Educate staff/faculty on the benefits of green purchasing.

Slowly implement green purchasing guidelines. Possible create incentive for departments to do so.

Opportunities

LONG TERM

Continue to educate staff on the benefits of green purchasing. Also provide information to the departments and show them how the "green" purchasing they have been doing has lessened the University of Idaho's carbon footprint

PURCHASING NOTES

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Julia McIlroy	Purchasing Department	Indicators 1-5
University of Idaho Purchasing Survey		Indicators 1-5

REFERENCES

1. The Paper Project. http://paperproject.org/paperfacts.html
2. Rutgers University. http://greenpurchasing.rutgers.edu/responsibility.html.
3. Iowa State University. http://www.fpm.iastate.edu/recycling/default.asp.
4. Arizona State University. http://www.asu.edu/aad/manuals/pur/pur210.html.
5. Energy Star Fast Facts. http://www.energystar.gov/index.cfm?c=learn_more.fast_facts

University of Idaho

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TAUGHT BY: ED KRUMPE
SPRING 2011

UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Energy

1 Per Capita Energy Conspumption
2 Energy supply efficiency
3 Green House Gas Emissions
4 Energy Mix

Energy System

PER CAPITA ENERGY CONSPUMPTION

One simple way to measure indications of how we are doing is the simple math. We can check to see how we are doing based on how much energy is used total divided by the student population and compare them to other schools.

How Are We Doing?

The UI also currently gets all of its electricity from Avista.

While the UI has steadily been decreasing its energy use, student enrollment has also been decreasing. This affects the overall per capita numbers.

Did You Know?

The UI is using 5% less energy than it did in 2003.

Energy System

PER CAPITA ENERGY CONSPUMPTION

Recent Accomplishments

LEED silver building policy – This is a policy adopted in 2008 that requires all new buildings and major remodels meet this building standard which is designed with green building methods.

Energy savings performance contract - UI hired McKinstry Co. to implement $35 million in energy conservation improvements. Some of these improvements involve upgraded lighting and HVAC systems. The goal of this contract is to reduce total energy consumption by 25%

Educating and informing the campus – General information provided to the public around campus has become a goal to inform students of the vital role sustainable energy plays.

Sustainability Revolving Loan Fund – This is basically a loan that is meant to go into sustainable projects, to be repaid with the savings the projects produce.

Energy System

PER CAPITA ENERGY CONSPUMPTION

Opportunities

NEXT FEW YEARS

Public Awareness Campaign - Educate individuals on energy consumption per person at the UI, and provide specific steps detailing how individuals can reduce their energy consumption at UI and at home.

ENERGY STAR purchasing standards - Implement a university-wide purchasing policy that mandates that all electronic devices purchased are ENERGY STAR approved.

Electricity Conserving Technologies - Assess opportunities for electricity conserving technologies to build upon the infrastructure changes being implemented under the Performance Contract. Examples include motion detector lighting switches, day lighting controls and more aggressive energy saving settings in computer labs.

Increasing the Revolving Loan Fund –Recruit additional funding for the Revolving Loan Fund to provide long-term funding for additional energy efficiency and renewable energy projects.

Opportunities

LONG TERM

Monitoring Resources – In order for all UI personnel to better understand energy usage and the environmental impacts of each building, stations should be placed in each building that include a screen displaying the resource metrics of the building. These screens would provide details about the electricity, natural gas, and steam being used by the building and give some indication of how efficiently the building is performing. Also, the display would show the amount of greenhouse gases being released as a result of building operations in a given day.

Additional energy conservation projects – Long-term goals to reduce energy usage must also focus on behavioral changes. An example behavioral change to reduce unnecessary energy usage is having custodial staff turn off lights in bathrooms and other areas after cleaning.

Energy System

How Are We Doing?

In September of 2008, UI published a greenhouse gas inventory providing emissions data for 2005-2007. The report can be found at the University of Idaho Sustainability Center website, uisc.uidaho.edu. In accordance with the Greenhouse Gas Protocol UI reports its emissions in three distinctive categories referred to as scopes. Scope 1 emissions include direct GHG emissions from sources owned or controlled by UI: natural gas usage, UI owned vehicle fuel usage, and refrigerant leakage. Scope 2 accounts for GHG emissions associated with the generation of purchased electricity. Scope 2 emissions physically occur at the facility where electricity is generated. Scope 3 allows for the treatment of all other indirect emissions. Scope 3 emissions include those from sources not owned or controlled by the university, or other sources not included in Scopes 1 and 2: waste, commuters, air travel, and animals. Figure 1 shows a breakdown of emissions by scope. Electricity related emissions dominate the UI GHG Inventory making up 67% of emissions in 2007.

Did You Know?

The University of Idaho is one of the leading sustainable universities in the northwest.

Recent Accomplishments

Publication of GHG Inventory – To meet its obligation under the American Colleges and Universities Presidents Climate Commitment (ACUPCC) the University of Idaho published a greenhouse gas inventory in September, 2008.

UI Joins CCX – UI is one of 8 Universities worldwide who are members of the Chicago Climate Exchange. Through its voluntary membership in CCX, UI is legally bound to reduce GHG emissions through emissions trading and offsets. UI is committed to reduce greenhouse gas emissions by 6% by 2010 from a fiscal year 2001 baseline. To reach this target, cumulative annual reduction goals of 1.5% from the baseline must be met starting in 2007. If the university fails to meet annual targets it will buy carbon credits to make up the shortfall; on the other hand, if the university exceeds reduction targets, it can sell credits on the carbon market.

Opportunities

NEXT FEW YEARS

Update GHG Inventory – The GHG Inventory needs to be updated annually. In addition, student projects are determining the GHG footprint of several satellite facilities, which need to be added to the inventory. Finally, once the CCX audit is completed, CCX information needs to be added in as well.

Develop GHG Reduction Plan – Development of a plan outlining steps for UI to become carbon neutral is underway, and expected to be completed by September 2009.

Determine offset potential of UI owned lands – UI owns over 8,000 acres of forested lands. These lands should be inventoried for their potential to offset UI emissions.

Complete GHG Inventories and Plans for all Satellite Campuses – Determining emissions from satellite campuses is necessary to get an accurate

Energy System

How Are We Doing?

The University of Idaho uses electricity, biomass, natural gas and vehicle fuel to provide a comfortable environment for students, faculty, and staff and for transportation. Most electricity comes from Avista Utilities via two metered feeds located at the east and west edge of campus. A number of buildings are separately metered by Avista, but these account for less than 2% of campus electricity use. The majority of the campus heating and cooling needs are met by burning wood chips in the UI Steam Plant. The steam plant burns wood chips in a biomass boiler to generate steam. The steam is distributed throughout campus by a comprehensive steam tunnel system that heats and cools about 75% of buildings on campus. Th rest of campus heating and cooling needs are met by a source of energy used at UI: natural gas. A natural gas boiler in the UI steam plant provides steam at high usa times when the biomass boiler cannot meet the load requirements. Natural gas is also used to heat building connected to the steam tunnel system and in research laboratories. A fourth energy source is fuel for UI own and operated machinery and vehicles.

Energy System

Recent Accomplishments

Solar lights – UI recently installed solar lights along a high use pedestrian path on the north side of campus (Figure 1). The solar lights are visible from the major highway that runs along the north end of campus, making them visible to travelers passing through Moscow.

Vandal trolley – The vandal trolley is a motorized trolley that utilizes B20 biodiesel fuel. The trolley began operations in spring 2000 as a vehicle available for special events on campus. Starting in 2008, the trolley is used as a shuttle service during Vandal football home games.

Vandal access shuttle – This shuttle became operational in 2007 to increase mobility for disabled students on campus. This shuttle runs on B5 biodiesel, increasing mobility while reducing emissions.

Electric vehicles – In September 2008, UI Facilities and Management Operations purchased 2 electric vehicles. These electric vehicles will be used for transporting facilities employees around campus.

Energy savings performance contract - UI recently hired McKinstry Co. to implement $35 million in energy conservation improvements. The installation of a new chiller tower will enable less dependence upon carbon intensive energy sources to cool and circulate chilled water at UI.

Energy System

Opportunities

NEXT FEW YEARS

Renewable energy feasibility studies – All university of Idaho property needs to be analyzed to determine the feasibility of building different renewable energy facilities. In order for UI to reach carbon neutrality it must reduce the amount of energy from carbon-intensive fuel sources.

Clean Energy Implementation Plan – Developing a clean energy implementation plan will enable UI to have a clear vision of how it will reduce its energy related emissions into the future.

Public awareness campaign – Disseminate information to the campus and community as a whole concerning the benefits of renewable energy. An educated public is more likely to support renewable initiatives on and off campus.

Opportunities

LONG TERM

Expand steam tunnels and biomass capabilities of UI steam plant– Currently the biomass boiler does not provide steam for all buildings on campus. The biomass boiler does not generate enough steam during peak times to meet the demand of buildings connected to the steam tunnels. Also about 25% of the campus buildings are not connected to the steam tunnels. Expanding the capacity of the biomass boiler and increasing the percentage of buildings connected to the steam tunnels will reduce emissions related to energy usage. Also, supplementing woody biomass with other biomass sources will ensure the long term feasibility of the biomass boiler.

Increase renewable energy generation – UI should depend less on Avista generated power, and instead investing in or developing our own renewable generation facility.

Co-generation Plant – Transform the existing UI steam plant into a cogeneration facility. The plant would produce electricity and still generate steam that could continue being used to heat and cool the campus.

Energy System

ENTER"SYSTEM" NOTES

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Insert name here	i.e.: manager, Campus Recycling & Refuse Services	Enter "indicator" i.e.:Wastewater

University of Idaho

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SPRING 2011

UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Built Enviornment

1 Total Square Footage
2 LEED Building Policy
3 Recent Buildings and New Projects

Total Square Footage of the Campus

Measurements Include:

1,585 acres (6.4 km²)
The campus includes:
253 buildings with a replacement value of $812 million
10 miles (16 km) of streets
49 acres (200,000 m²) of parking lots
1.22 miles (2 km) of bike paths
22 computer labs
150 acre (610,000 m²) golf course with 18 holes
80 acres (320,000 m²) of arboreta
860 acres (3.5 km²) of farms.

LEED Building Policy

LEED BUILDING POLICY:

LEED, or Leadership in Energy and Environmental Design, is an internationally-recognized green building certification system. Developed by the U.S. Green Building Council (USGBC) in March 2000, LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

LEED promotes sustainable building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance. The LEED rating systems are developed through an open, consensus-based process led by LEED committees, diverse groups of volunteers representing a cross-section of the building and construction industry. Key elements of the process include a balanced and transparent committee structure, technical advisory groups that ensure scientific consistency and rigor, opportunities for stakeholder comment and review, member ballot of new rating systems, and fair and open appeals.

LEED is flexible enough to apply to all building types – commercial as well as residential. It works throughout the building lifecycle – design and construction, operations and maintenance, tenant fitout, and significant retrofit. And LEED for Neighborhood Development extends the benefits of LEED beyond the building footprint into the neighborhood it serves.

http://www.leedbuilding.org/

The University of Idaho is trying to meet the LEED rating system with all of its present and new buildings to create a more sustainable campus. The more "Green a building is" the higher the LEED rating. It is the University's sustainable building standard.

Newest Building Projects

RECENT BUILDINGS AND NEW PROJECTS

Examples

SUB Green Roof Project

When?

This was the most recent project completed in May 2008 starting in December 2007

University of Idaho

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UI MOSCOW CAMPUS
SUSTAINABILITY ASSESSMENT

Food Systems

1 Higher Percent of Local Food
2 Higher Percent of Organic Food
3 Higher Percent of Waste Composted
4 Reduced Total Food Waste
5 Higher Education Initiative

Food Systems

HIGHER PERCENT OF LOCAL FOOD

The average American meal travels 1,500 miles from farm to plate. An important factor in maintaining sustainability is to be able to acquire food locally. The University of Idaho has been putting forth an effort to increase the amount of our food purchased locally. However, when stacked up against other programs U of I's local food program could definitely use some work.

How Are We Doing?

- Right now we get about 5% of our food locally, or more specifically, within Latah county and counties that neighbor it.
- The current goal is to have 12% of University food to be grown locally.
- We also have a program called Soil Stewards, which is a student led program that grows organic produce on a 1-acre plot for our dining facilities.
- We get all our grain from Shepherd's Grain which is an alliance of local sustainable farmers.
- Vandal bakeries provide all the bread for campus.
- The University operates a dairy, located behind W that currently has a population of 100 milking cow

Did You Know?

Of the 5,441 pounds of produce the University of Idaho uses per week, 5% is grown locally.

Food System

HIGHER PERCENT OF LOCAL FOOD

Recent Accomplishments

- Soil Stewards goals are to promote the preservation of natural resources and sustainability through community outreach, research, and experiential learning.
- We recently received a grant for USDA Livestock research that may ultimately end up in more local meat and dairy products being purchased.
- The University of Idaho recently awarded the new food service contract to Sodexo. Sodexo is currently working to provide its customers with local and regionally grown foods as best they can.

Comparing our Performance

- Washington State University gets their grain from Shepherd's Grain as well and all of their pre-baked bread from Hearthbread Bakehouse locally in Spokane and they also get their grain from Shepherd's Grain.
- WSU gets their potatoes from Walla Walla, Beef from Angus Meats in Spokane, chicken from Mount Vernon
- WSU receives produce from their orchards and the Tuky organic farm on campus
- WSU get their tortillas and tortilla chips from a local producer in Spokane called DeLeon
- A high percentage of the food at WSU comes from within 100 miles of the campus.

Food System

HIGHER PERCENT OF LOCAL FOOD

Opportunities

NEXT FEW YEARS

- Soil Stewards was just awarded a grant of $3,000 that will be used to build hoop house.
- Continue to grow and develop Soil Stewards to become a more product producing system.
- Currently Soil Stewards operates 3 acres of land, but only 1 acre of land is dedicated to growing organic food for the University. The other 2 acres are grown for the community.
- Hire a full time farm manager for Soil Stewards.
- With proper staffing, Soil Stewards could possible operate up to 8 acres.
- Begin receiving food services from more regional producers such as the ones that provide for WSU.

Opportunities

LONG TERM

- The University Dairy currently sells the raw milk it produces to a pasteurizing plant in Spokane, WA and then buys it back for a higher price.
- A local bottling plant has been determined to be financially feasible.
- Although the initial investment in a bottling plant would exceed $700,000, it would pay for itself in six years.
- The amount of milk produced would be more than enough to cover campus needs and all excess would be available to the local market for profit.
- Increase marketing opportunities for a future local or regional USDA meet processor.

Food System

HIGHER PERCENT OF ORGANIC FOOD

Organic food is grown without the use of pesticides, antibiotics, or genetically altered organisms using only natural fertilizers and crop rotation. There is a push nation wide to grow more organic foods. Nearly 25% of American's in 2007 would buy organic products once a week, up from 17% in 2000.

How Are We Doing?

Soil Stewards currently operates 3 acres and are dedicated to organic farming. One acre is used to grow food for campus dining. The other two acres are used to grow food that is given to people in the community who hold CSA shares.

Did You Know?

In order for food to be organic, it must come from producers that are certified organic.

Food System

HIGHER PERCENT OF ORGANIC FOODS

Recent Accomplishments

Soil Stewarts was given a grant to build a new hoop house to increase their growing season and to increase the amount of produce grown.

Comparing our Performance

Similar to Soil Stewards, WSU operates a four-acre certified organic teaching farm.

Food System

HIGHER PERCENT OF ORGANIC FOODS

Opportunities

NEXT FEW YEARS

-Hire a full time farm manager for Soil Stewards.
With proper staffing and volunteer work Soil Stewards could possible operate up to 8 acres of organic farming.
-It is not currently known what percentage of food provided by Sodexo is actually organic, so an inventory of where the food comes from could eventually help the university get more organic foods.

Opportunities

LONG TERM

-Continue to grow Soil Stewards and support local farming.
-Continue to support more organic food service contracts.

Food System

HIGHER PERCENT OF WASTE COMPOSTED

The University of Idaho is currently looking for methods to reduce waste and cost of waste removal. A step that the University has taken to reduce waste and cost is to begin composting waste. U of I currently operates a compost facility at the school dairy behind Win-co.

How Are We Doing?

Right now the University is using cornstarch utensils and sugarcane fiber plates as well as napkins that are made from recycled paper. The University does have a compost facility, but the amount of waste that is being composted is not at an optimum level.
The University of Idaho produces 100 tons of post consumer waste per year. Of those 100 tons, 37 tons is moved to the compost facility to be composted.
By composting waste, the University saves $7,500 in would be waste related costs.

Did You Know?

Bob's Place recycles 17% of its waste and composts 51%.

Food System

HIGHER PERCENT OF WASTE COMPOSTED

Recent Accomplishments

Back in the beginning of 2008, the campus began going compostable with alternative to plastic and Styrofoam dinning ware.
In the fall in 2008 the USIC awarded a grant to a student led project called the coffee composting project. The project involved going around campus and collecting used coffee ground. The additional coffee grounds aided in the creation of rich compost.

Comparing our Performance

WSU began compost operation in October 1994.

Food System

HIGHER PERCENT OF WASTE COMPOSTED

Opportunities

NEXT FEW YEARS

-Extend the Food and Farm Composting to all campus dining such as Denny's and events at the Kibbie Dome.
-Place more identifiable composting bins around campus to make it more accessible.
-Upgrade the composting facility infrastructure to better handle the large amounts of waste that the University produces.

Opportunities

LONG TERM

The University could further research of compostable material in order to get the most cost effective and sustainable material.
Develop and invest in compostable food packing material. The current standard for compostable products is if 60% of the material composts in 180 days. The European standard is 90% in 90 days.

REDUCE TOTAL FOOD WASTE

Along with beginning of composting at the University of Idaho, Bob's place began tray less operation. Going trayless has helped Bob's Place reduce waste and water usage. 30,000 gallons of water was saved over a 34 week period just by trayless operation.

How Are We Doing?

-The trayless operation of Bob's Place reduced food waste by 16%.
-The campus began using zero-waste catering for catered events.

Did You Know?

University of Idaho purchases, on average, 660 gallons of milk and heavy cream.

Food System

REDUCE TOTAL FOOD WASTE

Recent Accomplishments

-Trayless operation at Bob's Place.
-The University began using compostable dinning ware, such as cornstarch utensils, sugarcane fiber plates, and recycled paper napkins.
-Zero-waste catering for all catered events as of 2009.
-Zero-waste catering means that all catered events must be served with cornstarch utensils and sugarcane fiber plates or China plates, cloth napkins, and silverware.

Comparing our Performance

-WSU provides instruction to students of how to compost, but U of I has a more informing website.
-http://www.uidaho.edu/sustainability
http://gardening.wsu.edu/stewardship/compost/kitchen/wormcomp/wormcomp.htm

REDUCE TOTAL FOOD WASTE

Opportunities

NEXT FEW YEARS

Upgrade the infrastructure at the compost facility by adding a greater number of composting plots and aeration equipment. The current facility is operating at capacity and cannot handle more waste to be composted.

Opportunities

LONG TERM

Incorporate recycling and composting into all eateries and the Greek System on campus.

Food System

HIGHER EDUCATION INITIATIVE

In order for the University to become sustainable, the main factor of will have to be the education of sustainability to the Students. Students who know what sustainability means and what it takes to get there will be the driving force for the future. The current Brundtland Commission's definition for sustainability is "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

How Are We Doing?

-3 of 6 sustainability grants went to food related projects.
-Students can volunteer for 1 hour and direct other students through proper waste sorting and receive a free meal.
-Soil Stewards is a student run organization that all students can be a part of.

Did You Know?

The University of Idaho's goal is to become Carbon-neutral by 2030

Food System

HIGHER EDUCATION INITIATIVE

Recent Accomplishments

-In 2011, the University of Idaho will be offering an academic minor in sustainable organ agriculture.
-The University of Idaho participated in RecycleMania.
- The University of Idaho was recently awarded $438,000 to fund research the development of a sustainable livestock food system in the Pacific Northwest.
-The sustainability center began hiring students.
-Students can volunteer for an hour of sorting compost and receive one free meal for their time.

Comparing our Performance

-In 2006, WSU began offering a Major in organic agricultural system keeping in mind that WSU is twice the size of the University of Idaho.
- WSU provides instructions of how to build a small, onsite composting tub called an “Earth Tub” www.puyallup.wsu.edu/soilmgmt/EarthTub.htm

Food System

Opportunities

NEXT FEW YEARS

-Inventory classes that incorporate sustainability in the curriculum.
-Offer classes that involve compost and recycling processes.
-Offer program that would give students credits for being involved with Soil Stewards.
- Increase awareness and provide instruction for personal composting and recycling.
- Increase student employment opportunities related to sustainability.

Opportunities

LONG TERM

Add more conservation and service learning classes to the University of Idaho Core curriculum.
Add Major's that involve sustainable practices.

FOOD SYSTEM NOTES

Staff interviewed in the assessment of this system (bold indicates primary contributors):

NAME	CAMPUS ROLE	INDICATOR(S) OF RELEVANCE
Jeannie Matheison	Sustainability Program Advisor	All Indicators
Darin Saul	Sustainability Director	Food Waste
Freyra Bass	Soil Stewards Farm Manager	Higher Percent of Local and Organic Food

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