

## The Future of the Eco Mug

- The Eco-Mug is a nonprofit student run program designed to help reduce the waste of paper, plastic, and Styrofoam cups and promote patronage of local businesses.
- The Eco-Mug is a 15 oz. stainless steel travel mug. Those who have purchased this mug are able to receive discounts on refills of coffee and other beverages at more than 15 locations on campus and throughout Kalamazoo.
- Recently the Eco-Mug program has faced many difficulties generally due in part to student turnover and lack of campus support.

### How can the Eco-Mug benefit Western Michigan University?

- ✓ The project offers the University a chance to save large amounts of money in waste disposal costs and also cuts back costs from purchasing disposals.
  - ✓ Eco-Mugs allow WMU to promote a very positive image for the University towards promoting sustainability.
  - ✓ The program shows WMU is committed to a longstanding promise to promote sustainability.
- Three main problems that are slowing down the success of the Eco-Mug projects today.
    - 1) Getting the mugs into the hands of freshman and incoming students.
    - 2) Creating a structure for a program that allows self sustainability for future years.
    - 3) Advertising.
  - What do the students want??
    - ✓ Mugs that are manufactured within the United States.

- Getting the mugs into the hands of incoming freshman and new students. Statistically students are more likely to use their mugs if they get them right when they move into the dorms.
- Students are also more likely to utilize the mugs if they could be used in the dorms and many other places around campus.

### University of Oregon

- ✓ In 1990 University of Oregon eliminated disposable cups in Housing food service areas and assigned all the new students reusable/refillable mugs.
- ✓ Dining services can accumulate large savings from the reusable mug and at Oregon University the savings are just over \$30,000 a year from eliminated disposable cups.
- ✓ 80% of campus food service areas support the use of the reusable mugs.
- Advertising is a big issue in terms of the success of the Eco-Mugs. We need to sell the mugs at the bookstores, Bronco Bash, and other campus events.
  - ✓ Ties directly in with self sustainability.

# **Western Michigan University**

## **The Future**

### **Eco – Mug Program**

Report by:

Derek Brownlee

Environmental Studies 410: Appropriate Technology and Sustainability:

The Campus as a Living Laboratory

Dr. Glasser

Spring Semester 2008

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### **1.0 Executive Summary**

Recently, due to student turnover and a lack of strong campus support, the Eco Mug program has faced many difficulties. In order to maintain the integrity of the project there has to be several issues needed to be addressed in order to ensure that operations run smoothly to help maximize the success of the program. This project offers the university a chance to potentially save large amounts of money in waste disposal costs. It also offers a chance to save a large amount of money in terms of the costs of purchasing the disposable cups themselves. This program gives the University a very positive image in promoting sustainability. It helps build awareness about the issues of unnecessary consumer waste that is produced throughout the university. The program is very positive in helping the campus create a longstanding culture committed to sustainability. Many different businesses within the greater Kalamazoo area are supported by the Eco Mug program.

A large portion of the students on Western Michigan University's campus are genuinely interested in sustainability and helping create a campus that is committed to a sustainable future. It is very important that we get Eco Mugs into the hands of incoming freshman and new students as soon as possible. Statistically if the mugs are distributed at the beginning of the year they are more likely to be used throughout the duration of the year at various locations. Finding out a way to get the mugs to be able to be used in the residence hall food areas is a long running issue that has been hurdle since the program began over 7 years ago. In recent years student purchasing of the mugs has gone down considerably, there has to be a way to get Eco Mugs to be used more often. Money is one of the biggest constraints with the Eco Mug program, finding a way to make sure that the program can be self sustainable for future years is a distressing problem. The program has to have a stable platform before it can be passed from generation to generation of students involved in the Eco Mug program.

A possible alternative that has worked in Universities across North America could be to completely eliminate Styrofoam and paper cups and only sell reusable mugs at the food service locations throughout Western Michigan University. This no doubt would save thousands of dollars a year and eliminate large amounts of waste disposal but it again raises the issue of the health code violations with the drink dispensers in the food service locations. The costs of retrofitting the nozzles on the drink dispensers so reusable mugs could be used in the cafeterias would pay for itself rather quickly. In another positive aspect of eliminating Styrofoam and paper cups completely would be that every incoming student would potentially have a mug throughout their whole college career. The amount of waste saved would be astronomical every year and would show that the University is committed to a long standing role in sustainability.

These different alternatives have worked for campuses all across the nation and have proved to be self sustaining and support commitment to sustainability. The more people that we make aware of the Eco Mugs on campus the more likely changes are to be made and people would become more prone to voice their opinions on the issue if they knew the facts. Future

work must be done. In this project one of the issues that I came across was the type of mug that is distributed to students. If the mugs were manufactured in the United States more students would be likely to buy the mug rather than if it was manufactured abroad. Advertising and exposure is another issue that has to be dealt with in the future there dozens of campus events at which the Eco Mugs could be distributed at and we need to take more advantage of that.

## **2.0 Introduction**

Western Michigan University goes through hundreds of thousands of Styrofoam cups every year, nearly 850,000, costing more than \$15,000 annually (previous 410 projects). What this means is that every day around Western's campus there are roughly 2,329 Styrofoam cups that are being used and disposed of everyday. Styrofoam cups are the worst culprits, as it never degrades. Americans throw away 250,000,000,000 styrofoam cups every year. Even 500 years from now, the foam coffee cup you used this morning will be sitting in a landfill somewhere (The Recycler's Handbook). If one student or faculty member at Western Michigan University purchased a disposable cup everyday for one year, each person would generate up to 23 pounds of polystyrene waste each year. The mission statement to Western Michigan University enshrines an ethic to "advance responsible environmental stewardship". We view the ENVS program as crucial to WMU's mission promoting and advancing this fundamental tenet of sensible and ethical behavior. As ENVS students, all of us in Dr. Glasser's 410 class have a responsibility to promote this mission statement and do everything we can to ensure the environmental stewardship for generations to come.

## **2.1 History of the Eco Mug**

In the spring of 2001, a group of Environmental Studies 4100 students vied towards implementing a reusable mug program similar to the ones at The University of Oregon and The University of Vermont. The main goals of the original Eco-Mug group was to try and decrease much of the polystyrene (Styrofoam) cups that were being used and disposed of on and around areas of the campus. This in turn helped eliminate waste around the campus starting from less non-biodegradable materials being thrown away. This also promoted recycling on the campus in terms of raising awareness on just how much unnecessary waste the University goes through every year, not to forget the amount of money that is being saved from energy costs that go into producing and disposing of the polystyrene.

Initially there were twelve different businesses that were involved with the program but, none of the campus housing dormitory cafes were on board. Originally the design was a 22oz. bright blue mug that was 100% post consumer recycled plastic. The popularity of the mugs was quite successful and students seemed genuinely interested in using the mugs but there were still some major drawbacks with the mugs that were discouraging use from students and faculty alike. The mugs proved not to be very durable and they were the wrong shape in terms of fitting comfortably in the hands of its users. Shortly thereafter Tristan Brown

revamped the look of the Eco Mug and changed the face of it completely. It was now a 15oz. stainless steel travel mug that fitted more to the request for students. At this point everything seemed to be moving smoothly with the Eco Mug project, the WSA paid for the mugs in 2005 and it seemed like they were going to be self sustaining for years to come. Things took a turn for the worst in 2006-2007 when the WSA would not fund the Eco Mug program and by November of that year the Eco Mug committee was without money, mugs, and basically back to square one.

In the following months Janelle Garchow applied for a research grant through WMU which she got and \$1000 was used towards the purchase of mugs that were put out the second semester of that same year. It seemed like things were falling back into the original plan and they were shifting gears of the Eco Mug towards publicity and advertising to try and get the community of Kalamazoo to become more aware of what the Eco Mug committee was trying to do. There was a film that was created to help promote the Eco Mug and it use which was very interesting well put together when I saw it. After this the problem of finding people to run the Eco Mug program was the next hurdle that the existing committee members were encountering. They held a committee meeting in 2007 and hardly anyone showed up, this was quite a shock because without anyone to pass the torch to the program could suffer greatly. Shortly afterward the price of the mug was raised from \$5 to \$7 in an attempt to make the Eco Mug program self sustainable. This became a problem because it seemed that not enough people wanted to pay \$7 for a mug that they could only use at 15 locations many of which were located off campus.

The Eco Mug project has the potential to be one of the most successful environmental projects at Western Michigan University. The large amount of non-disposable waste that is generated at WMU every year is not only bad for the health of the environment but also lacks energy efficiency and cost effectiveness in purchasing and disposing of the polystyrene.

### **3. Methodology and Data**

One of the first things that I wanted to do was get out and see how much the students knew about the Eco Mug projects. I put together a survey to find out different aspects of the mug that were most appealing to students around campus. I randomly selected 44 students throughout Western Michigan and administered a volunteer survey much like the previous Eco Mug groups. The results of the survey were in some ways exactly what I had expected and in a couple other ways I was a bit shocked at some of the answers that I had received. I wanted to take a different direction than the Eco Mug had ever gone in before so I concentrated my survey on where the mug was manufactured, particularly if they would be more likely to purchase the mug if it was made in America and I even took it one step further to see if they would be more likely to buy the mug if it was manufactured and distributed in Michigan. The results from the survey proved that the majority of people would be more likely to purchase the mug if it was

made in the United States and a few went even further and said they would definitely purchase it if it was manufactured in Michigan.

One of the main reasons that the Eco Mug is not used in the campus dormitory food areas is that the nozzles on the fountain pop machines are not retrofitted to accommodate the Eco Mug within the health codes of Kalamazoo. If the drink nozzles were altered to fit health regulations the use of the Eco Mug would inevitably sky rocket among students especially if some kind of discount or incentive was offered for using your mug. This goes hand in hand with the issue of getting Eco Mugs into the hands of freshman right when they arrive on campus at the beginning of the year. Another issue within the program is funding, in recent years WSA has not been on board with funding the Eco Mug program so they are going to have to find ways to accentuate the program so it is ultimately self sustainable.

Another issue that I addressed in my survey was again like in previous years the style of the mug. I threw out some different options on my survey with a few different types of mugs that might interest the student body to help get mugs into the hands of more students and faculty around campus. The majority of the people stuck with the stainless steel mug but it was a close race with the number of people that said they would purchase a reusable mug that was a carabiner (much like a nalgene bottle).

### **3.1 Companies and Alternative Mug Options**

#### Discount-Mugs.com

This was one of the best options that I could find when it came to finding a mug that fit the bill of the Eco Mug transitions that I am proposing in my project. The mug itself is a 16oz. stainless steel insulated mug that comes in 9 different colors and can be customized to a variety of different requests. With a larger number of the mugs purchased as would be need to supply the Eco Mug program the price drops dramatically to the point where they are actually quite cheap .(see appendix for quantities and prices) The most appealing part of the mug for my project concern was that it was manufactured in the United States. All the different mugs that are shipped out of Discount-Mugs.com are manufactured and shipped directly from Southern Florida.

#### WEBB CANDY INC.

This particular company seemed like a promising candidate for a possible Eco Mug of the future and is manufactured within the United States also. After contacting WEBB CANDY I found out that the mugs most likely would not fill the requirements of the mug by Students for a

Sustainable Environment. These particular mugs have a double wall construction with foam insulation and plastic insert. It comes with a push-on-drink-thru lid and a rubber base.

[IronWorkerGear.com](http://IronWorkerGear.com)

This was the website that was suggested by my fellow classmates in 410 towards finding a mug that was manufactured and distributed in Michigan. After scouring the website and contacting representatives from the website I found out that they do not offer a stainless steel mug that is manufactured in Michigan. The only mugs that they offer on the website are purchased as gifts and they are your general 12 ounce ceramic coffee mugs.

[www.logotoyou.com](http://www.logotoyou.com)

These particular mugs are located out of Greer, South Carolina where they are currently being manufactured and distributed. This particular mug has an insulated steel outer wall and proved to be quite durable. It was 16 ounces and had a slide open lid similar to the travel mugs that you can purchase at Bigby's Coffee. The prices for this particular mug were fair and I feel like this exacting mug could be an option for the future of the Eco Mug project. After emailing Chris Masters from logotoyou.com he was very adamant in stressing the shelf life and positive feedback that he receives from his costumers, this could potentially become a good investment for the future.

### **3.2 Michigan Manufactured Mugs**

After a lot of research I found that it was very difficult to find a particular mug that was not just distributed but manufactured within Michigan. Almost all the businesses that I came in contact with in Michigan only distributed mugs that were from Asia, particularly China and Taiwan. Although from the general survey this does not seem to be that much of an issue from the consumers that will be purchasing and using the mugs, as long as they are manufactured within the United States rather than a foreign nation people were more willing to purchase them.

## **4. Examples of Best Practices on Campus**

Currently WMU is doing a lot of positive things towards advancing the Eco Mug Project as far as they possibly can to help further the sustainability on the campus. At present the mugs are allowed to be used at 15 different locations throughout Western's campus and the greater Kalamazoo area. Every little bit helps in terms of the amount of Styrofoam that could be saved from being used. The environmental group has recently secured 23 local business sponsors. All the sponsors will offer discounts to customers who use their Eco Mug when purchasing

beverages. They will receive free advertising and in addition will be saving money due to decreased material costs.

The advertising of the mugs is in gear to become very positive in moving the Eco Mug program forward. Presently the promotional design and materials are in progress of becoming revamped to be more appealing, hopefully promoting the further and extended use of the Eco Mugs. The more Eco Mugs that end up in the hands of students and faculty, the more Western Michigan University shows its commitment towards a sustainable future.

## **5. Examples of Best Practices on other Campuses**

### University of Oregon

In 1990 the University of Oregon eliminated disposable cups in Housing food service areas and assigned all the new students reusable/refillable mugs. Disposable cups make up a little more than 12% of disposable items in food service operations. Dining services can accumulate large savings from the reusable mug and at Oregon University the savings are just over \$30,000 from eliminating disposable cups. These mugs are important in terms of enhancing eco cultural sustainability because they can be used over and over again which allows the university a chance to promote waste reduction and directly contributes towards the campuses recycling efforts.

The program at Oregon is similar to our own in the sense that they offer the students and faculty a chance to help promote waste reduction but they take a step further than we do here at Western Michigan University. A big part of their success is the fact that at the beginning of each new school year each all incoming freshman and all new students are given the reusable mugs to use in various campus dining facilities. It is very important to get the mugs in the hands of students at the beginning of the year because statistically they are more likely to use the mugs at various stores and dining halls. Advertising and exposure are two of the main reasons that the reusable mug project at Oregon is so successful, there are constantly mugs that are for sale at different dining facilities, bookstores, and other campus related events all year long. With the more mugs that are sold around campus it makes it very easy for the project to be self sustaining which is one of the main problems that the Eco Mug committee is dealing with these days.

One of the most compelling things that I found about the sustainability efforts at Oregon University was how they took it one step further than just having a successful reusable mug program. An idea has been proposed where the university will issue a plate and utensils to all incoming dorm residents or possibly a reusable tupperware lunch box that comes along with food ware. Students will be required to use these at all food service housing areas or else they will have to pay a fee to use disposables. This is a smart idea because they save on waste and disposables while gaining enough funding to pay for the disposables themselves. This is a prime example of how Oregon University is constantly thinking outside the box to reduce waste management and promote campus recycling.

## University of Vermont

The University of Vermont, University Dining Services, and the Intervale Compost Project are working in alliance to come up with different solutions in reducing the amount of waste that is dispersed throughout various landfills in the surrounding areas. The university supports the use of reusable mugs and students who use these mugs pay only \$.99 per refill on any size mug on campus. Another incentive that the university has come up with is very influential in terms of conservation is that for each Eco-Mug purchased Sodexo Corporation donates \$.15 to the National Fish and Wildlife Foundation.

The mugs are offered at all dining locations on campus and since 1992 have created some of the most innovative waste management ideas that have spread all over North America. As a result of the original "CUPPS" program (Can't, Use, Paper, Plastic, or Styrofoam) came a new innovation called the "Spot a Mug" program. This is an incentive to try and get more people at The University of Vermont to use their reusable mugs as much as possible. If anyone is spotted using their mug by the University Environmental Council they are given a coupon which allows them a free refill of soda or coffee at any of the participating locations.

## **6. Discussion**

There are several different issues that I have come across with Eco Mug program at Western Michigan University. One of the main issues is getting the Eco Mug into the hands of all incoming students every year and making it noticed to where these mugs can be taken to get various discounts. The action of getting mugs into the hands of freshman goes hand in hand with the number of establishments that they are allowed to use them at around campus. Getting the mugs to be used in the different food service cafeterias around Western Michigan's campus is a huge factor in promoting the success of the Eco Mugs. Many students are aware of the Eco Mugs but many of the establishments that accept the use of the Eco Mug are further away from areas than many freshmen go. If they are constantly using their mugs in the dorm cafeterias they are more likely to carry them along when they are visiting areas a little further away from campus. If you only use the mug every once and a while rather than a couple times a day it is more likely to be lost in a dorm room or forgot about because there is not that much of an incentive to use the mug. The University of Pennsylvania's reusable mug program is so successful because almost 80% of food service establishments support the reusable mug program helping in the success of the program.

Almost 85% of the people that I interviewed said that if the Eco Mug was made within the United States that would be a bigger selling point than if the mugs were manufactured abroad. From the surveys I conducted I found out that the price and type of the mug are big issues in terms of students purchasing them. Getting mugs that are manufactured within the United States will entice many of the students to buy the Eco Mugs even in most cases if they reach the price of \$10. There are plenty of manufactures within the United States that fit the Eco Mug requirements and can be fairly cheap if ordered in bulk.

Advertising is a big part of the Eco Mug project we must get the mugs out into circulation at WMU. We need to be selling them at bookstore, bronco bash, and any other major events

where the promotion of the Eco Mug could be very successful. The more mugs that are sold and being used the more businesses become interested in carrying the mugs because it is a good opportunity for free advertisement and it is also a good way to save money of disposable cup costs.

## **7. Limitations of Your Analysis and Future Work**

There are some obvious limitations when it comes to a project of this magnitude. Time constraints are the biggest limitation that I encountered when carrying out this project. The necessary changes that would need to be made to ensure the successful and long standing future of the program take a lot of time and effort to complete. The students right now in this program are on a volunteer basis and one of the issues when I met with Benson Frost was that there is not enough time for the committee to pursue all the angles that they would like to on a consistent basis. The amount of time it would take for many of these necessary changes to be made, many of the students would already have left the program. There must be a strong base of students involved in the program from early in their college careers to keep things moving smoothly.

Another limitation is money to carry on a program like this there is a lot of money that is involved. There is not a lot of extra money that is available for every project without leaving some others out. With decreasing support from WSA and a lack of being able to successfully have a self sustaining project it is very difficult to produce the necessary funds to run the program year after year.

## **8. Conclusions**

The mission statement to Western Michigan University enshrines an ethic to “advance responsible environmental stewardship”. We view the ENVS program as crucial to WMU’s mission promoting and advancing this fundamental tenet of sensible and ethical behavior. Western Michigan University is committed to make the campus a sustainable environment for current and future generations and the Eco Mug has a huge potential to add the environmental stewardship of the University. There are a few things that could happen to skyrocket the program and make it as successful as it is at other major universities.

Within the following years it is very important that we get Eco Mugs into the hands of incoming students for the reason that if they are exposed to the mugs early in the year they are more likely to use them more often rather than have them lost in their dorm room or car. Currently at the University of Vermont they have implemented a program called the “Spot-a-Mug” where if students are spotted using their mugs by a member of the environmental council they are given free refills or mugs in the future. Issuing a mug to each freshman would be a tremendous boost for the Eco Mug program. Again, we will need to come to agreements with the head of University Dining services Judy Gipper in order to find a way to retrofit the drink

nozzles so the mugs can be used in the campus food services areas. At the University of Pennsylvania they have a program where reusable mugs are distributed to all incoming freshman and this program is very successful because almost 80% of the food vendors in the Penn community support the program by offering discounts for using the mugs.

Money is one of the most constraining issues when it comes to maintaining the Eco Mug program it requires quite a bit of dollars coming into the program, and for this to happen you have to want people to buy the eco mugs and use them; if this happens then more businesses will be likely to invest in the mug which further helps the promotion and awareness of the use of the Eco Mugs. For the success of this program it is going to have to find a way to be self sustainable and that means that the program is going to have to locate a mug, price, and enough convenient places to use the mugs for students to want to purchase them.

In the long term the University should look at eliminating all paper and plastic cups and replace them with reusable mugs that the students and faculty will have to carry around and use. This will eliminate thousands of pounds of non-biodegradable waste and thousands of dollars in disposable fees and purchasing fees. University of Oregon has eliminated the use of disposable cups and they are saving over \$30,000 dollars a year not to mention the massive amounts of non-biodegradable waste that would be coming from the University if they did have disposable cups. Implementing this program at WMU would directly contribute to the University's waste reduction efforts and help promote recycling.

## 9.0 References

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<http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=10094>

Neil Fifield

[nmffi@Kalcounty.com](mailto:nmffi@Kalcounty.com)

Sustainability at the University of California Berkeley

<http://sustainability.berkeley.edu/assessment.html>

Benson Frost

[Benson.s.frost@wmich.edu](mailto:Benson.s.frost@wmich.edu)

Janelle Garchow

[Janelle.garchow@wmich.edu](mailto:Janelle.garchow@wmich.edu)

<http://www.uoregon.edu/~recycle/Book/HTML/Chapter%2011.htm>

Food For Thought

<http://www.upa.pdx.edu/SP/about/>

Humboldt State University Recycling

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<<http://www.nwf.org/campusecology/html/dspresearchinfrastructure.cfm#dining>>

<http://www.wisebread.com/the-coffee-cup-revolution-lets-take-a-stand>

<[http://uds.uvm.edu/social\\_composting.html](http://uds.uvm.edu/social_composting.html)>

Eco Joes: Green Thinking for the Average Joe

<<http://www.ecojoes.com/styrofoam-cups-vs-paper-cups/>>

[www.ironworkergear.com](http://www.ironworkergear.com)

Chris Masters

<http://www.discountmugs.com/us/index.php?c=2&p=66>

[chris@logotoyou.com](mailto:chris@logotoyou.com)

[www.logotoyou.com](http://www.logotoyou.com)

## 10.0 Appendices

### A. Current Contact List:

**Name**

Derek Brownlee

**Phone Number**

517-204-6217

**Email**

[d3brownl@wmich.edu](mailto:d3brownl@wmich.edu)



Different pricing ranges on the mugs that were available at Discount-mugs.com

It is a 16oz. stainless steel mug with a durable handle that fits the whole hand. It has a chrome cap with a spill prevention side lock. This mug was the best decision that I could come up with in terms of an alternative mug that was manufactured and distributed within the United States.

Qty	12+	24+	48+	96+	144+	288+	576+	1008+	2016+	5000+
Price	5.24	3.37	3.39	2.97	2.71	2.63	2.54	2.29	2.25	2.20