Memo: 22 November 2011

To- Professor Jensen, Dan Bellrichard

From- Tristen Eberling, Kevin Althoff, Austen Graham

Re- Plastic water bottle consumption at Luther College

Summary:

The goal of this project was to research the use of bottled water by the Luther community. Previous work has already been done on the sale of bottled water on campus. This project sought to get a better idea of why Luther students use bottled water and how often.

We believe that there is a convenience factor behind the use of bottled water. Because of this, we do not propose an all out ban of bottled water on campus at this point. Instead, we conducted a small scale study to attempt to pinpoint what factors make bottled water more convenient for the students that choose to use it. We will then suggest changes that might improve the convenience of tap water on campus. The goal is to make the more sustainable choice the more convenient one. In this case that means making tap water easier to use without taking away the choice.

Some facts about water bottles: One ton of recycled plastic saves 5,774 kWh of electricity, 685 gallons of oil, and 30 cubic yards of landfill space. Also plastic takes up to 1,000 years to degrade in a landfill.

Rationale:

We acknowledge the relative insignificance of bottled water waste at a college that already practices sustainability, and we realize that many students do not use bottled water at all. However, regardless of how widely it is used, the availability of much greener alternatives (tap water and drinking fountains) makes plastic water bottle use a needless form of waste that should be able to be reduced rather easily.

The convenience of being able to buy bottled water when its needed means that some students may object to banning bottled water. This will probably always be true. To account for this, we think the best approach to the problem is to make the more sustainable choice (tap water) the easier choice in more situations, thus decreasing the use of bottled water (and
therefore the waste) without eliminating the option. This is an ideal approach because it doesn't eliminate any choices for students, but it still encourages a shift towards sustainability.

**Research Methods:**

We gathered information in the form of an electronic survey. The very short survey was designed to get a rough idea of how many students use bottled water, with a much greater emphasis on why. The survey also contained a question asking students to indicate what types of changes would make tap water more convenient.

The survey was sent out using Katie to students who shared classes or other functions with group members. Over 100 students responded to the survey. While this is a relatively small sample, we believe it is sufficient to make a statement about a larger group of students.

**Proposal:**

Based on the results of our survey, we must acknowledge that nearly 50% of the students in our sample reported that they never use bottled water, with a significant percentage only reporting to use it less than once per week. However, there are still other significant things to be learned from this data set. Students have a smattering of reasons for using bottled water. The only noticeable result is that 22% of respondents said they prefer the taste of bottled water. This would be difficult to address, however it may be beneficial to look into this in the future. It is also relevant that significant percentages of students said that having cheap reusable water bottles widely available, as well as equipment to fill those on drinking fountains would decrease plastic water bottle use. While the latter is already being addressed, it would be prudent to look in to the former in terms of viability as a way to further reduce the sale of bottled water on campus.

**Research results:**

How often do you purchase/use bottled water?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>59</td>
<td>47%</td>
</tr>
<tr>
<td>Less than once a week</td>
<td>47</td>
<td>38%</td>
</tr>
<tr>
<td>1 to 4 times a week</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td>More than 5 times a week</td>
<td>9</td>
<td>7%</td>
</tr>
</tbody>
</table>
Which of these statements best describes why you use bottled water?

- I don't have a reusable water bottle 6%
- It's too hard to refill my water bottle on campus 2%
- I prefer the taste over tap water 21%
- I don't have easy access to drinking fountain, tap, etc 8%
- It's too much work to keep a reusable bottle clean 10%
- My organization or sports team supplies bottled water 5%
- Other 49%

Do you think a ban is necessary to reduce the use/sale of bottled water?

- I think plastic water bottle use can be reduced without banning them. 92 students or 74%
- I think the only way to decrease the use of plastic water bottles is to ban their sale on campus. 31 students or 25%

Which of these changes would cause you to use fewer plastic water bottles?

- Spouts on drinking fountains for refilling water bottles 80 66%
- Cheap, reusable water bottles widely available 67 55%
- More types of reusable water bottles available (non plastic) 45 37%
- Raise the price of bottled water on campus 45 37%
- Only a ban of their sales on campus would cause me to not use them 11 9%
- Other 14 11%

*People may select more than one checkbox, so percentages may add up to more than 100%.