



Bottled Water Ban Project

A project for responsible hydration

A group of students in the spring 2013 Project Management course (BUS378) developed a project to (1) gauge attitudes of the student body regarding the sale of single-use water bottles; (2) learn how education plays a role in these attitudes; (3) initiate a petition drive to gain signatures supporting a ban on single-use water bottle sales on campus; and (4) present their findings to the ASUI governing body to seek a resolution in instituting the ban.

The group constructed a survey that was to be distributed to the ENVS 101 class, taught by Dr. Bob Mahler. In the regular curriculum, Dr. Mahler includes a section regarding the issue of bottled water and how it compares to municipal drinking water. Our goal was to determine if attitudes and basic ideas about access to drinking water sources changed after students were exposed to this information. The survey consisted of 2 separate distributions of essentially the same questions:

1. Bottled Water is safer than tap water:
Strongly Disagree Strongly Agree
0 1 2 3 4 5
2. Municipal water is more regulated than bottled water:
Strongly Disagree Strongly Agree
0 1 2 3 4 5
3. Paying for safe, quality drinking water is acceptable:
Strongly Disagree Strongly Agree
0 1 2 3 4 5
4. Bottled water is better tasting than tap water:
Strongly Disagree Strongly Agree
0 1 2 3 4 5
5. I buy single use water bottles on campus:
3+ per day 1-2 per day 1-3 per week 1-4 per month
Never
6. When I buy single use water bottles, I recycle:
Always Sometimes Never I don't buy bottled
water
7. Do you know which entity (if any) controls the quality of your tap water?
a) Environmental Protection Agency (EPA)
b) Idaho Department of Environmental Quality
c) Food and Drug Administration (FDA)
d) Latah County
e) None
8. Do you know which entity (if any) controls the quality of your bottled water?
a) Environmental Protection Agency (EPA)
b) Private Firms (ex. Pepsi or Coca-Cola)
c) Idaho Department of Environmental Quality
d) Food and Drug Administration (FDA)
e) None
9. Which of the entities listed in questions 7 and 8 have the highest quality standards?

10. What beverage do you drink most often?
a) Soda
b) Coffee
c) Water
d) Tea
e) Juice
11. How much time do you spend exercising daily?
a) 0-30 minutes
b) 30-60 minutes
c) 60-90 minutes
d) 90-120 minutes
e) When I can
12. Are you a student athlete (intramurals included)?

Yes No
13. What is your gender?

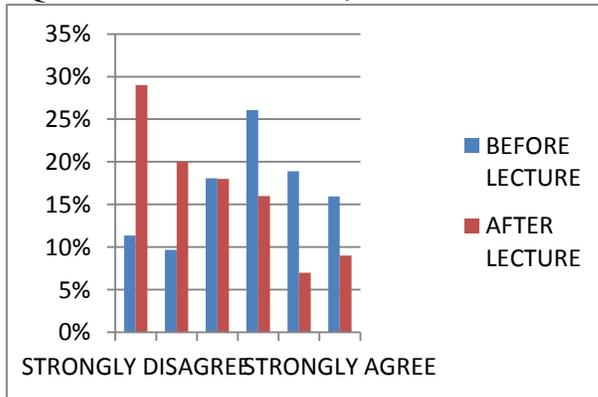
Male Female
14. Do you live on campus or off campus?

On Campus Off Campus

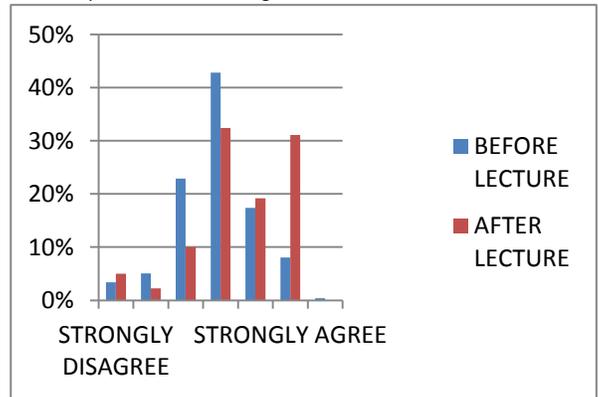
The only change to the after survey was a section asking students if the class had affected their opinion about bottled water and tap water.

Knowing that the majority of the group would be there for both surveys, and that they would all receive the same educational material, we recorded their responses to gauge the effect of education on the topic:

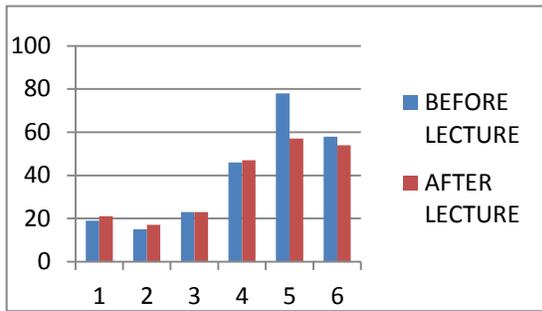
1. Q1: Bottled Water is safer than tap water:



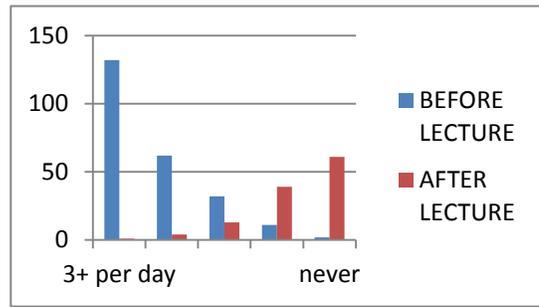
Q2: Municipal water is more regulated than bottled water:



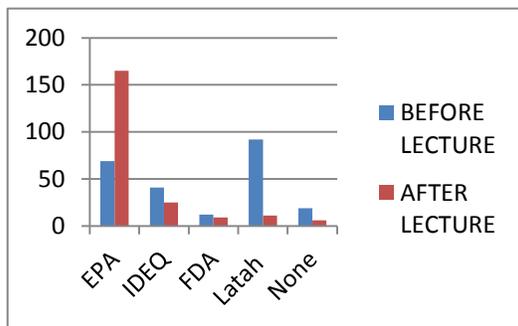
Q4: Bottled water is better tasting than tap water:



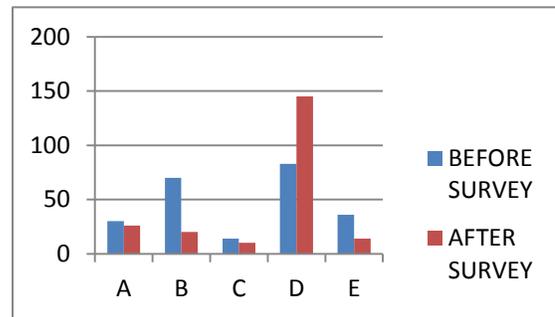
Q5: I buy single use water bottles on campus:



Q7: Do you know which entity (if any) controls the quality of your tap water?



Q8: Do you know which entity (if any) controls the quality of your bottled water?



What was particularly striking about the data was the increase of awareness in what government entity regulates their drinking water (fig. a.). Also there was an almost opposite response to question 5 indicating that respondents would not be as willing to purchase bottled water on campus (fig. b.).

Fig. a.

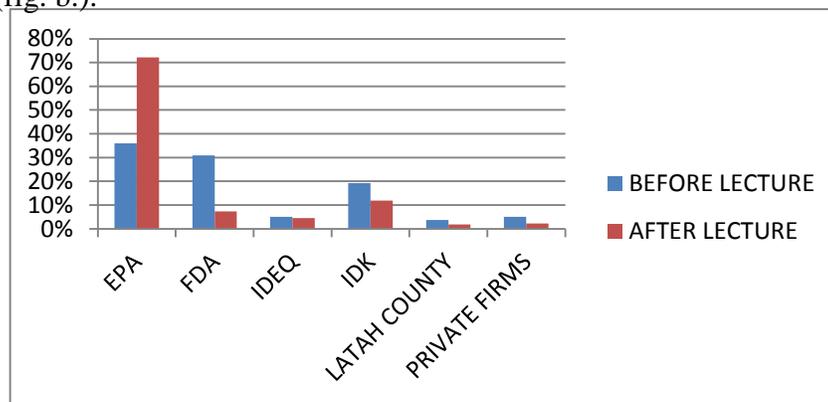
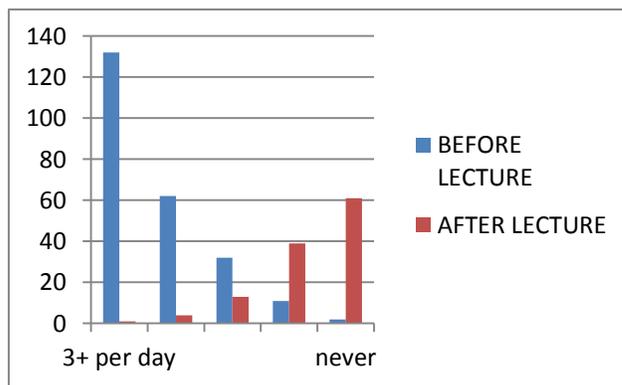


fig. b



In addition, students who received the educational material no longer believed that bottled water was better for them than water from the tap. On the second survey, we allowed students to write comments about what they learned in the class about bottled water. Here is what some of them said:

"There is a misconception about bottled water. Most people think it tastes better, is safer, and is cleaner than tap water when in reality tap water is better in all 3 categories, and is better regulated."

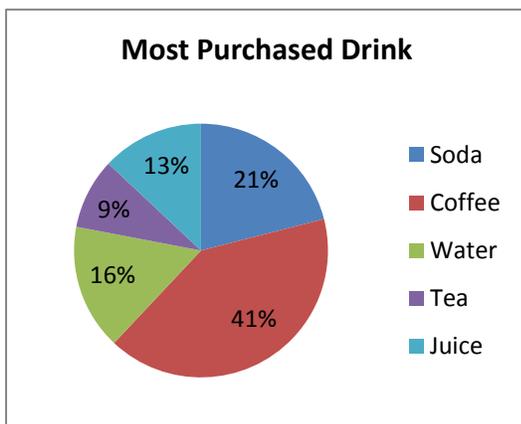
"Bottled water is less regulated than tap water"

"helps me to see that bottled water is not worth the price"

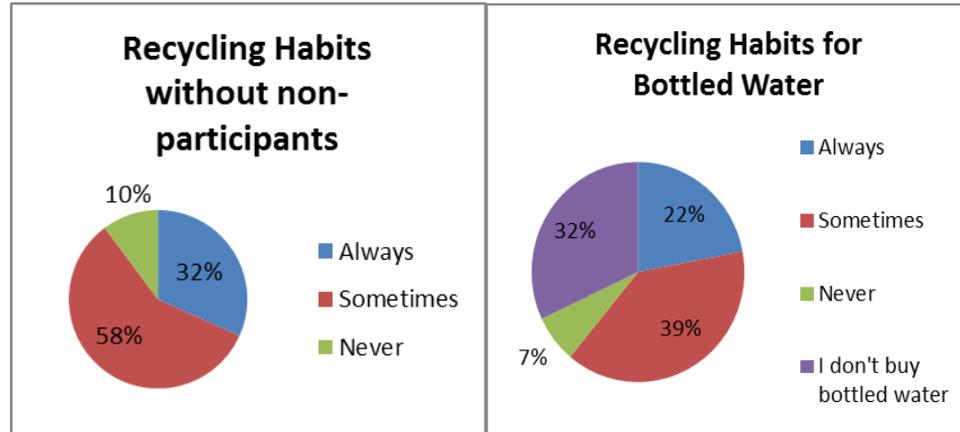
"I now feel safer drinking tap water"

Next, the group constructed a survey that was to be distributed campus wide electronically, to once again see what students' attitudes were towards single-use water bottles, water use in general, and the idea of restricting the sale of these bottles on campus. Some of the questions and the responses we received are listed below:

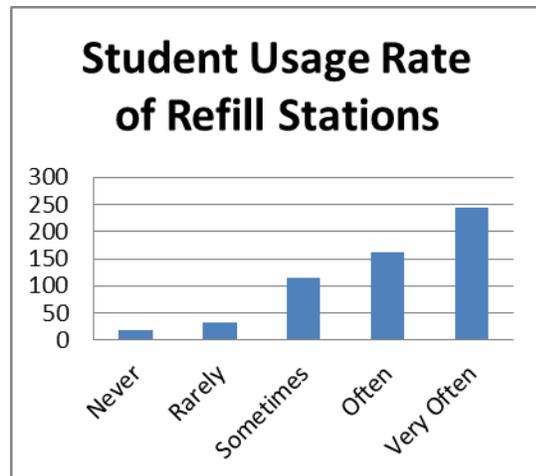
1. Which beverage do you purchase most often?



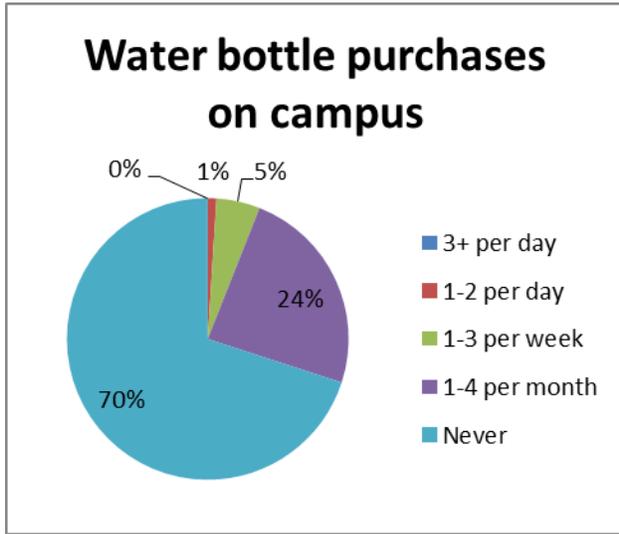
2. A single use water bottle is a plastic water bottle which you may or may not choose to re-use. How often do you recycle your single use water bottles?



4. Water refilling stations are like soda fountains at fast food establishments but only for water. Currently there are refilling stations located in the TLC building on campus. Would you use a water refilling station if more were built on campus?



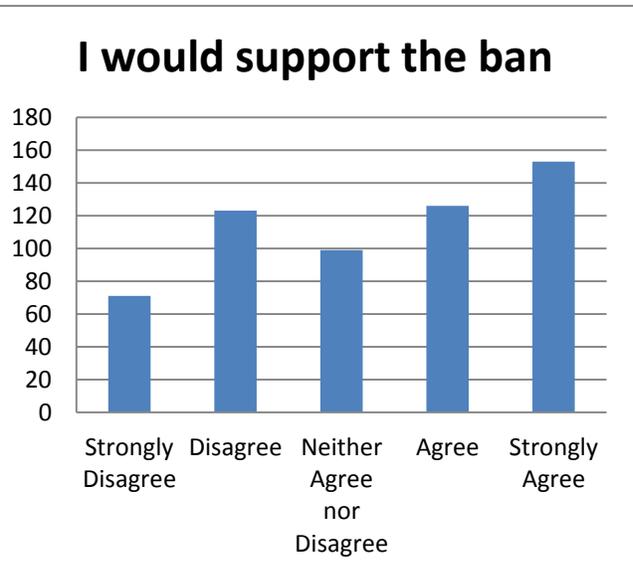
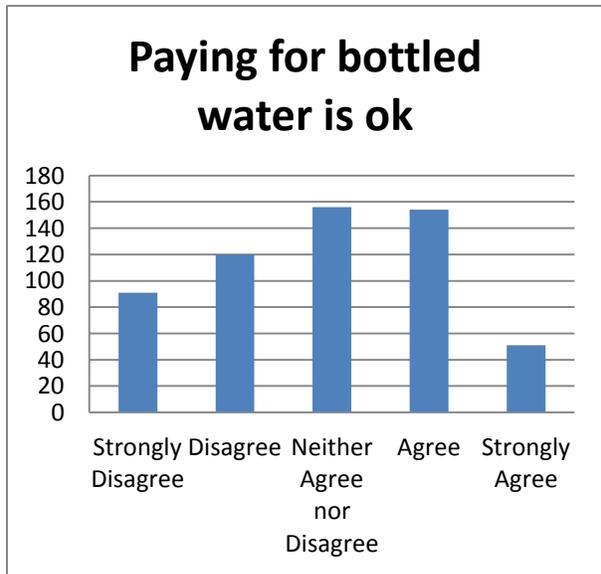
5. The amount of single-use water bottles I buy on campus is:



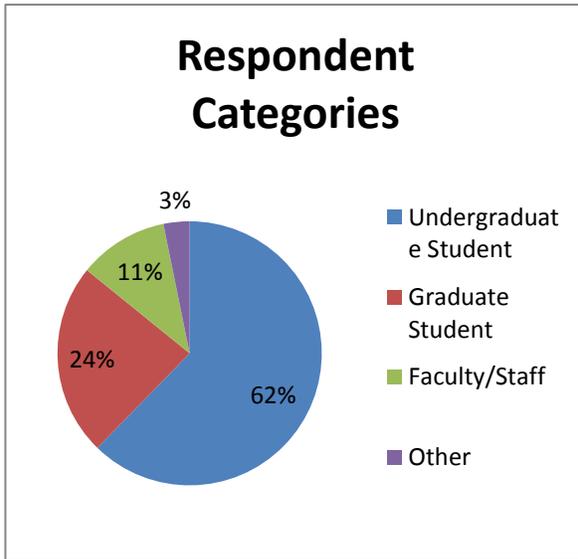
7. Please rank the following statements:

A. Paying for unflavored, bottled drinking water is acceptable.

B. I would support the decision for the University of Idaho to stop selling single-use water bottles in their stores.



10. Which category best describes you?



70% of people do not buy bottled water on campus so the impact of a ban would be on a minority group

The overall for supporting the mean is 3.29

In terms of vocal minorities and outliers there are more people who strongly support, than strongly oppose.

350 undergraduates completed our survey

A total of 565 respondents took the survey

Only 16% of respondents indicated that their most purchased drink was water, and less than 30% answered that they buy bottled water on campus indicating a ban would affect only a small group and the economic impact on the University would be small as well. Almost 50% of survey participants either “agreed” or “strongly agreed” with the idea of banning single-use water bottle sales on campus. Whereas only 34% indicated they would disagree with the ban. The remaining 16% were indifferent indicating that close to 70% of the student population would either support the ban or not be affected since they don’t buy bottled water on campus. In addition, over 92% of survey participants indicated they would use refill stations at least “sometimes” if they were installed throughout campus and in more accessible locations.

The project team consisted of:

David Haase – Project Manager
Heath Hewett – Project Lead
Caitlin Morrow – Project Lead
Matt Hurt – Survey Coordinator
Mike VanLydegraf – Petition Coordinator
Emily Long
Shawna Bertlin
Molly Loucks
Ryan Hutten
Croix Gilliland
Rashell Beckman

The team would like to thank our project sponsor, Jeannie Mathieson of the U of I Sustainability Center, for her incredible support and advice. We would also like to thank the class instructor, Tracie Lee, for her support and the generous offer for funds to purchase giveaways and prizes. Below is a copy of the Project Charter which indicates the goals, scope, and deliverables that were agreed upon by the team and the sponsor. This can be used as a template for further projects on this topic.

PROJECT CHARTER FOR BOTTLED WATER SALE RESTRICTION

Sponsor Name/Title: Jeannie Mathieson, Sustainability Center Program Coordinator

Team Project Manager: David Haase

Team members: Rashell Beckman, Shawna Bertlin, Croix Gilliland, Heath Hewett, Matthew Hurt, Ryan Hutten, Emily Long, Molly Loucks, Caitlin Morrow, and Mike VanLydegraf.

Problem Statement

The University of Idaho carries bottled water in its retail outlets and vending machines on campus. These single-use water bottles increase the solid waste output of the university as over 80% of the bottles are not recycled.¹ Increasing the recycling rate or reducing the consumption of these bottles may assist in the University's goal of being carbon neutral by 2030. The production of the plastic for these water bottles also emits a significant amount of carbon dioxide resulting in an increased carbon footprint. Energy usage is required to chill the bottled water and space is required to store the bottled water for retail and vending outlets. The water contained in the bottles is also not as rigorously tested, or held to as high of a standard as municipal drinking water.² In addition tap water is offered free to the students, faculty, and staff of the University, while bottled water on campus costs between \$.99 and \$1.59.

Project Goal Statement

The goal of the project is to promote cultural change on the campus of the University of Idaho leading to a reduction in the purchase and use of single-use water bottles.

Statement of Scope

Many U.S. Universities have restricted the sale of single-use water bottles, including University of Vermont, Gonzaga University, and Washington University in St. Louis, and others have campaigns to do¹ the same at Ohio University and Penn State University. A group of students from University of Idaho's Project Management class is working with the UI Sustainability Center to propose a single-use water bottle sales ban throughout the campus. The team will obtain data from surveys to gauge support for the ban, collect signatures on a petition if there is support for the ban, and present this information to the ASUI governing body, as well as GPSA, to obtain resolutions. Once these resolutions are achieved, the team will approach the contracts manager to arrange for an alteration to the existing contracts with the University's vendors to end the sale of retail bottled water at the Vandals stores and the campus' vending machines. The proposition would include promoting extra hydration stations and reusable water bottle incentives for incoming students as well as raise awareness on campus about how harmful single use water bottles are to our environment. The proposition is planned to be carried out by April 30, 2013.

Deliverables:

1. "Plastic water bottles not being recycled". State of California Department of Conservation, May 29, 2003
http://www.consrv.ca.gov/index/news/2003%20News%20Releases/Pages/NR2003-13_Water_Bottle_Crisis.aspx

2. "Bottled Water: Questions and Answers". Minnesota Department of Health, December 12, 2011,
<http://www.health.state.mn.us/divs/eh/water/factsheet/com/bottledwater.html>

- Survey- (campus-wide)
- Survey-(pre and post bottled water lecture in ENVS 101)
- Compile Survey Results
- Signed Petition – 2000+ signatures
- Presentation for ASUI/GPSA
- ASUI Resolution
- GPSA Resolution
- Present resolutions and survey results to Tyrone Brooks at Auxiliary Services
- Post the survey results and petition on the Sustainability Center Website

Measures of Success

- Receive 1500 responses to the campus wide survey.
- Acquire 2000 signatures on ASUI resolution petition.
- Have a 50% increase in understanding of bottled water issues utilizing surveys distributed before and after the topic of bottled water is covered in ENVS 101 class by Dr. Mahler.
- Present a proposed resolution to ASUI banning the sale of bottled water at the University of Idaho Moscow campus.

Scope Change Management Process

We will establish a scope document accessible in the Bottled Water Project Team dropbox. In the event that there are changes to the scope of the project, e-mail communication will be used between the sponsor and the team to notify of the need for change. Should the change be approved through negotiation and consensus, the dropbox scope statement will be revised. Changes may also be presented in the bi-monthly status update with the sponsor.

Key Assumptions

- Students at the University of Idaho may not understand the detriments of buying single use water bottles.
- The students at the University of Idaho do not think the quality of municipal drinking water available free to them is better than bottled water.
- Bottled water is a measureable increase to the University's waste stream.
- The University of Idaho and its vendors will be willing to make changes to their current operations based on support from the student body and an ASUI resolution.
- Students would be willing to carry with them a refillable water bottle at all times.

Key Project Constraints

- Surveys must be approved by Dr. Mahler before presentation of bottled water material in class.
- Petitions, surveys, and other materials must be ready before presentation to ASUI.
- Level of support for the project from student body and campus staff/faculty is unknown.
- Little to no funds available for setting up petition signings.
- Single use water bottle sales are an important source of revenue for the University of Idaho.
- Project steps must be completed before 4/30/13.

Key Stakeholders:

- Bottled Water Project Team
- Hannah Davis, ASUI President
- Alysha Van Zante, ASUI Director of Sustainability
- Jon Treasure, GPSA Director of Sustainability
- ASUI/GPSA Student Governing body
- University of Idaho Sustainability Center
- Jeannie Mathieson, Sustainability Program Coordinator, UI Sustainability Center
- Dr. Robert Mahler, Professor of Soil and Environmental Sciences, University of Idaho
- Tyrone Brooks, AVP, Auxiliary Services (manages vending contracts)
- IDAVend, (distributor of bottled products at the University of Idaho)
- Pepsi-Cola (distributor of bottled products at the University of Idaho)
- Campus Dining, U of I Bookstore, Sister's Brew (distributors of bottled products at the University of Idaho)
- Tracie Lee, Instructor, BUS378

Signatures:

Sponsor

Project Manager