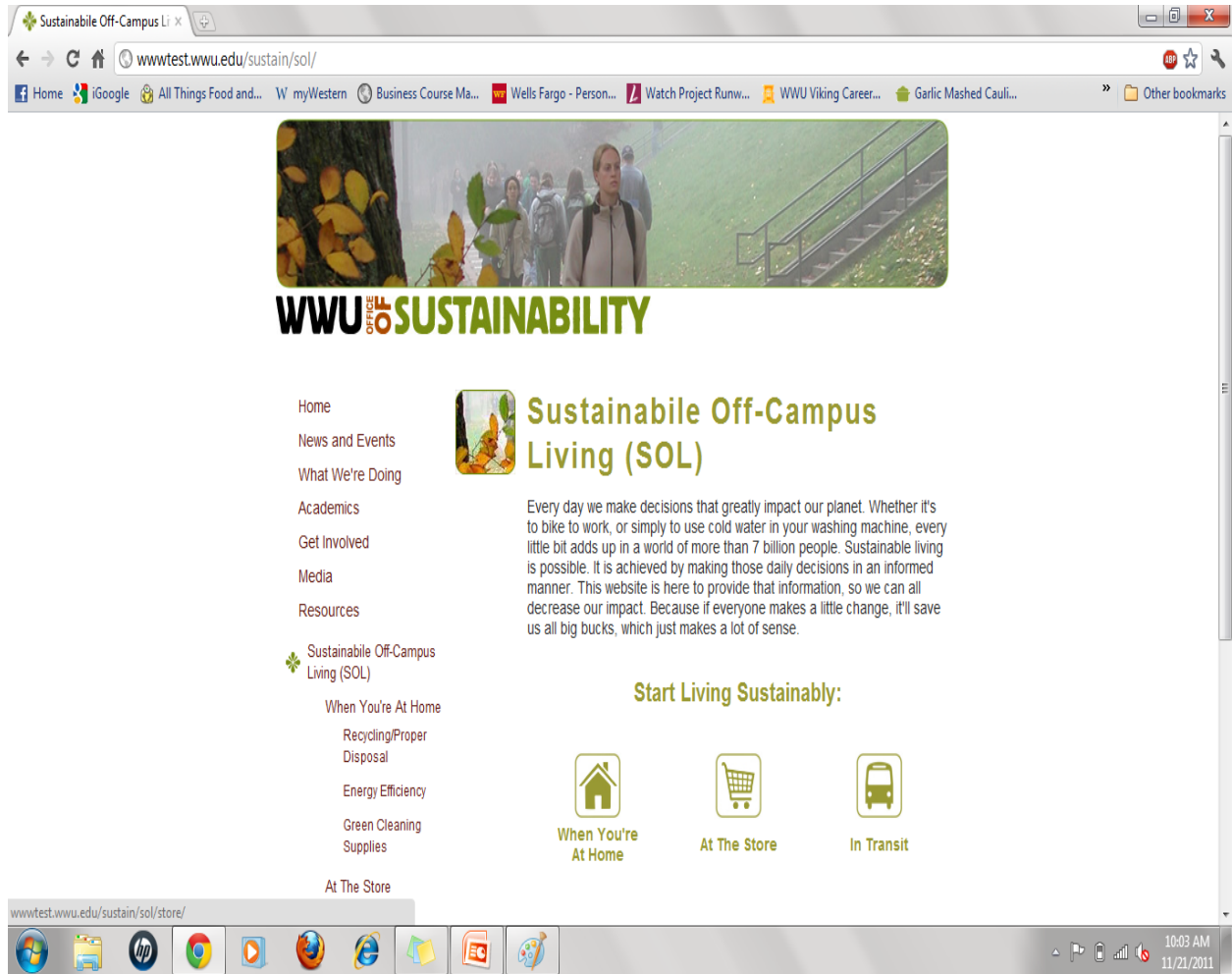# Sustainable Off-Campus Living (SOL)

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1.0 Introduction-

1.1 Purpose behind the Project

Western Washington University is a college of the environment and serves as an example of sustainability within a college setting. Signing the Climate Action Plan, volunteering to have Carbon Neutrality by 2050, and by building a sustainable campus that leads by example, Western Washington University is at the forefront of "green" and sustainable practices for students and faculty and staff on campus. But what about the students, staff and faculty that live off campus and within the communities surrounding campus? Western Washington University students, faculty and staff, and individuals in communities surrounding Western have expressed a desire to live more sustainably, but are not provided an all-inclusive resource regarding support and education. In order to encourage sustainable living in Bellingham, we have to have a resource that addresses questions, educates the public, and provides comprehensive sustainable living facts. This project is an ongoing process to build, provide, and maintain a list of resources for students and faculty living off-campus to reference for support and to encourage sustainable living.

1.2 What is Sustainable Off-Campus Living (SOL)?

The concept behind Sustainable Off-Campus Living is to provide a single location for resources that educate the public on sustainable living that is all-inclusive, and easy to navigate. There is public interest being expressed in providing such a resource on the Office of Sustainability website. By providing this resource, the opportunity exists to give the communities surrounding Western Washington University (WWU) and future generations of WWU alumni the ability to live more sustainably and serve as sustainable living leaders in the Bellingham area. Although living sustainably may be on an individual basis, the potential impact of having an educated public will spread beyond individuals to encompass communities and Bellingham as a whole.

1.3 Significance to WWU and Communities

The benefits that Sustainable Off-Campus Living (SOL) provides to WWU students and staff and faculty reach beyond campus and communities surrounding WWU and into Bellingham as a city and Whatcom County. SOL will be providing a resource to individuals that want to live more sustainably, and through the evolution of these individuals' lives, the education that they are provided with from this website can translate into their families and friends' lives. The potential to change how people live today and how they affect the future generations is vast, important, and critical.

2.0 Methodology-

2.1 Website Development

The development of the SOL website takes place in five main stages. The first three of which we have overseen.

1. First, we chose the basic information we wanted to provide based in three general areas: sustainability at home, in transit, and at the store. At home we believed that most important would be, energy conservation, green cleaning, and proper disposal/composting/recycling of waste. In transit our research focused on Sustainable transportation options around Bellingham, as well as ways to promote fuel efficiency. For sustainability at the store, we were concerned with both, where to buy, and what to buy. All to ensure the least impact, while at the same time considering the costs / benefits, of doing so.

Our actual research process was wide and very general. Our very project is based on the idea that this information is not readily available in one place. So we divided and conquered, each focusing on a few particular areas. We then took that information, summarized it, condensed it, and formatted it, in a uniform manner.

2. Second we submitted that information to the Office of Sustainability's website developer (Shayne), so she could compile a test website.

3. Third we brainstormed general improvements to the site (formatting, and some additions). We have also asked our CSPS classmates to look over the site and fill out another short survey with their comments and questions. And at the beginning of winter quarter 2012 we will present Huxely Staff and faculty with a similar survey.

4. The fourth phase of development will be to provide a revised public website for students and staff and faculty at Western.

The fifth stage as we see it is simply growth. There are some things we would like to see but as we've noticed we are not the only ones with ideas for the site. The importance would be moving away from links to other resources, and more towards student created content, eventually producing an even more interactive site containing a forum and sustainability competitions. However the site will grow largely based on student staff and faculty feedback.

2.2 Student Survey

In order to accurately answer students questions about sustainability, we needed a tool to get a better understanding of which resources to focus on. To do this, we created an online survey that asks students very short questions about what kind of resident they are, what resources they are looking for, and whether or not they would use the site. Instead of assessing the entire student body, we narrowed our population by administering the survey to environmental groups around Western. These students mostly live off campus and are inclined to refer to a sustainable resource website. We hoped the survey would allow students to be honest about their desire for such a website and which issues needed to be covered first in order to draw students in. Since there are a lot of students involved, we were looking for broad information and comments to help us prioritize at the beginning of our project.

http://www.surveymonkey.com/s/2KX9HZ7

2.3 Student Survey II – Feedback on SOL Webpage

This survey was given out with a link to the pilot site. The survey was very broad and aimed at receiving all types of feedback on the site such as design, content, or items they want added/removed. Students were asked what they liked, what they would change, and any questions they had. The responses to the survey are being examined and will contribute to the next round of changes with webmaster Shayne to be ready by the start of Winter Quarter 2012.
http://www.surveymonkey.com/s/GBGNYVX

2.4 Huxley Survey

Since the site is to hopefully become both a student and a community resource, we wanted to broaden our surveying population but still keep it focused towards environmentally conscience members of Bellingham which we decided to accomplish through surveying Huxley College for the Environment faculty. The survey, like the student version, aims to assess if the website will in fact be used and what information is most helpful. Unlike the student version, this survey included a pilot site that could be looked at for feedback along with questions about topics. This survey went out to a smaller group of people but was looking for more in depth feedback and to work out preliminary website issues. Since a large part of website success is its user friendliness, we need to make sure the layout is aesthetically pleasing and easy to use as well as having pertinent information. Please see Appendix 2.2 for the Huxley Staff Survey.

2.5 Internet Research

In terms of Internet research our goals were simple. We were hoping to address what we saw as the three main categories of sustainability. Sustainability at home, in transit, and at the store. At home we believed that most important would be, energy conservation, green cleaning, and proper disposal/composting/recycling of waste. In transit our research focused on Sustainable transportation options around Bellingham, as well as ways to promote fuel efficiency. For sustainability at the store, we were concerned with both, where to buy, and what to buy. All to ensure the least impact, while at the same time considering the costs / benefits, of doing so.

Our actual research process was wide and very general. Our very project is based on the idea that this information is not readily available in one place. So we divided and conquered, each focusing on a few particular areas. We then took that information, condensed it, summarized it, and presented it in a uniform manner to our webmaster (Shayne Smith) so it was easy to formulate a "pilot" web page.

2.6 Contacts and Meetings

2.6.1 Insider Interviews (please see Appendix 2.4 for full interviews)

Michael B. Smith - Cleaning Educator at Western Washington University

Michael Smith provided very influential and important information in regards to how WWU has changed its cleaning policies to become almost 100% sustainable. The cleaning and maintenance department for WWU won an award last year for being the most sustainable university cleaning department in the nation. Michael also addressed issues that he has had to face from his cleaning staff regarding the usefulness and actual sanitizing and cleaning abilities of using sustainable cleaning products. The biggest challenge that he had to overcome in order to prove that the new ActiveIon technology actually worked was to stage experiments and provides evidence showing real results. He used WWU's traditional cleaning methods as a comparison for the ActiveIon technology. Michael also noted that students and staff at WWU shouldn't be afraid to use and try natural, homemade, and sustainable cleaning products

as they don't contain dangerous chemicals, are safe to use around children, and are as effective as or more effective than commercial brand cleaners. He also provided a list of cleaners that he and his staff used to use that are safe and sustainable.

Claudia - Manager of Environmental Stewardship and Sustainability Office at the University of Washington

Claudia provided great insight into marketing and raising awareness of an all-in-one resource such as the one we are building. The University of Washington had attempted to build and provide a similar resource to its students and staff and faculty, but due to a lack of awareness and lack of use, the website was cut when the university reformatted its website. Claudia also provided great insight into using the resources that are already offered on campus to raise awareness, such as using newsletters. She also suggested that we get into contact with WWU's marketing department to see if they could help us raise awareness.

Mike Aday - Webmaster, CTO and VP of Engineering at 1000Museums, President and CEO at Notorious Ventures

Mike provided great insight into how to build our website. In particular, making sure that we are not adding so much information that the user gets bored and does not want to read anymore, and organizing our information in such a way that it is easy to navigate, follow, and does not consume the page.

2.6.2 Contact List

Michael B. Smith - Cleaning Educator at Western Washington University
(360) 650 - 3034
michael.smith@wwu.edu

Claudia - Manger of Environmental Stewardship and Sustainability at the University of Washington
(206) 221 - 0391
oess@uw.edu

Mike Aday - Webmaster, CTO and VP of Engineering at 1000Museums, President and CEO at Notorious Ventures
mike.aday@gmail.com

Stanford University
(650) 723 – 2544
Program Director: Robert Dunbar
dunbar@stanford.edu

Shayne Smith - Webmaster for WWU Office of Sustainability
(360) 650-2491
shayne.smith@wwu.edu

3.0 Case Study

3.1 Similarities

In order to get an idea of the magnitude and difficulty of our project, we looked at other websites that had a similar layout looking to offer students sustainability resources. Among the ones we found, the "Sustainable Choices" site at Stanford University was the most like what we created and where we are going for the future. The site was grouped into large categories such as "about", "home", and "resources" which is very easy to use, but it also had the sections "take action" and "the card" unlike any other university. Their taking action section was broken down into places, i.e. home, road, and store and then broken down once more to individual topics with information. The user had online resources in the event they wanted to research, or they could easily navigate their way through dropdown menus to find the exact info they needed. The individual ideas of tips were all rated for simplicity, carbon impact, money savings, and health helper ensuring that the user has a quick way to assess if it is what they were looking for. Furthermore, one of their main sections had "The Card"; a PDF form of a printout filled with helpful on-the-go sustainability tips. This site offers resource websites, direct info, and even on the go print-outs all on an easily navigated format. Please see Appendix 3.1 for a screen shot of Stanford's "Sustainable Choices" front page.

3.2 Dislikes

It was more common in our research of other websites to find one that we disliked. These were very helpful in that they helped us envision the site we wanted since we knew what to avoid. We found very quickly that many Universities had created sustainability resource websites, but they were a compilation of other websites and lacked information that was easy to access. In order for students to use the site we knew we needed to offer more than just a list of websites for that does not save students time doing their own research. Easy to find and easy to access info is necessary, especially to draw in students who may not otherwise work towards a green home. Other dislikes were basic layout issues, such as font and colors that we will want to avoid to make the site as easy to read as possible. Please see Appendix 3.2 for screen shots of Macalester College and Oregon State University's resource pages.

3.3 Taking it Forward

Unfortunately our site is not up the caliber that we would like it to ultimately be at. Like the Stanford site, we eventually will have multiple drop down menus with a bountiful amount of information that is in both site and text form. Currently, the site has the first layers of this and will increase with time assuming students continue to maintain and add to it. As desired information increases there will be more reason to have numerous labeled sections and a more complex site will be needed and therefore as students begin to use the site and voice which subjects they are looking to more know about, the more it will begin to take the form of "Sustainable Choices". Working to create take home print-outs, a scheme in order to quickly rate the tips and projects, as well as more tangible information will all be the next steps of the site.

4.0 Research and Analysis

From reading the student surveys, observing in our own neighborhoods, and looking to other school websites, we decided on a core set of topics to begin our website; recycling, composting, e-waste, green cleaning products, green businesses and, alternative transportation. These topics were most prevalent in daily off-campus student life and yet there is a complete lack of information for easy ways to make changes or be educated. Splitting up the work between the three group members allowed ample research time on the topics and for each of them to include a set of helpful links, tips, and blurbs on websites.

Using Stanford as the primary example, we split up the topics under "At the Store" "In the Home" or "In Transit". From there, organization was made much easier and Shayne simply had to copy our already compiled information under the appropriate heading. Most of the subjects will extend to many other topics over time so adding them to the site will only require categorizing them and putting the quickest tips at the top. Further thought into the organization of topics on the page will come as the page grows organically. More information will require better organization and further work with Shayne but this is not necessary as of yet.

5.0 Conclusion -
Our goal for this project was to find resources relevant to providing support and education regarding sustainable off-campus living and offer them to the public in an all-inclusive and easily accessible manner. We have been successful in building a webpage located of off the Western Washington University Office of Sustainability Resources page. Ranging from how to live more sustainably at home, at the store, and in transit, SOL provides education and support regarding these topics. By providing this resource to the public, the possibility to change how an individual, family, or community lives is undeniable.

6.0 Future Work –
The most important future work at this time is gaining awareness from students, staff and faculty, and communities in Bellingham and encouraging them to visit the SOL website. We have brainstormed a wide variety of ideas including:
- Tabling in Red Square
- Posting in all of the newsletters that circuit campus
- Fliers
- Advertisements and announcements on the main WWU webpage
- Self advertising from students – going to classrooms and giving a small presentation describing SOL and its importance and uses for students

From our short presentation to our CSPS, class it's clear that there is a great deal of room for growth and innovation regarding the SOL website. Students have expressed interest in adding a variety of user friendly additions to the website including:
- a forum/blog
- frequently asked questions
- the ability to comment on the links we provide

While the SOL website's potential is great, what it needs now is a person, or many people, that can devote the time to properly market it, continue marketing it, maintain it, and add new content. New content could be:
- incorporating current events
- an interactive portion like forums
- videos
- taking the content provided by the links and replacing it with student generated content (most important)

We would also like to see the SOL website's link posted on all of the school websites (colleges and universities) within Whatcom County, and see significant utilization from individuals throughout

Whatcom County. In order for SOL to be successful, it must have maintenance, new content, and return visitors.

Appendices-
2.1 Student Survey

Off-Campus Sustainability Resource Survey

As part of the campus sustainable planning studio we propose to create a student resource for off campus sustainable living in the form of a website. Examples of resources would include information about:

- Composting
- Recycling (including e-waste and furniture)
- Energy Conservation
- Green Cleaning Supplies
- Transportation
- Local Green Businesses

1.) Are you an off-campus resident?   Yes____   No____

2.) Would you refer to the website to make your home more sustainable?

Yes____   No____

Why or why not?

3.) Which of the above categories are most pertinent to you?

4.) Do you have any other suggestions for categories on the website or information that is lacking on the web?

2.4 Contacts and Meetings
2.4.1 Insider Interview - Michael B. Smith
1) Contact name & position:

    a. Michael B. Smith – Cleaning Educator at WWU

WWU Ionized Water Technology Project

2) Timeline for project?

    a. 3 year process

        i. Looked at technology, continuing to look at products and lack of products that did what we needed to do

        ii. Purchased a couple of units and some auto scrubbers- have echo technology… we like it, not using chemicals just water to clean with, water is being processed to become a cleaner- has cleaning properties, liked what we saw, looking for silver bullet… it can't have an effect on the cleaner and the client. Worried about residues and disinfectants.

    b. No green disinfectant on market… ionized water made claims and we were skeptical… skeptical for 2 years

        iii. We took two of our cleaning teams and asked them to try them out, and got inconclusive evidence back… put on shelf for a while.

    c. At the time we were using 60-80% green seal and echo label products. Wanted to take the next step – technology progressed, came out with new line of equipment that had sanitizing properties due to an electrical pulse that then kills bacteria (destroys cell walls) on surfaces. Uses tap water

        iv. Tested new technology… used ATP metering – swab surface and test for triphosphate evidence- can't tell if it is a health harming pathogen… just testing to see change in activity. Swabbed it, tested, got a reading – went back with ActiveIon – wiped it off and tested it again – readings went down

        v. Tested against cleaner we were using and results were positive for water or were equal

        vi. Tested against spots in restrooms

        vii. Tested against steam vapor – we found that steam vapor is more effective for floor cleaning

    c. 28 purchased… using for 2 months now *our main cleaner, don't use anything else for routine scheduled basis

3) Players/stakeholders involved?

a. Students, staff, and faculty

        i. Initial input for this project was no from the custodians

        ii. Very little input was spoken by any of the stakeholders. Students and staff would only benefit from what we were trying to accomplish and they weren't really aware of what we were doing anyway

4) Reception/perception of the project of the stakeholders?

Staff couldn't believe that it really worked – products that remove gunk are solvent based and you don't want those products in an indoor environment, but that is what they were used to using and they knew it worked

5) Biggest challenges? (at least three)

       a.   Down side is cleaning the floors with ActiveIon technology--- takes too much time, time is money

       b.   Convincing the staff that it worked

       c.   Gathering enough evidence to support our cause

6) How is the project progressing now?

       a.   We are now looking into steam vapor cleaning. We are 100% ActiveIon cleaning now, and we want to be 100% steam mops by the end of 2012

7) What cleaning products did you use before you switched to ionized water?

       a.   We used vinegar and water to clean floors

       b.   Used non-solvent based and natural cleaners for the rest of our cleaning

                i.   Bon Ami

8) What products do you still use?

       a.   For a few cleaning tasks… which are very few and far between that we are unable to use our ActiveIon… we use our non-solvent based cleaners

       b.   Not using steam mops exclusively clean floors, instead use vinegar and water

       c.   Vinegar

       d.   Bon Ami – felt spar, non scratching

                i.   All natural – all the way – 100%

9) Why does the custodial department care about having an emphasis on green cleaning? Is everyone in the department dedicated to this cause?

       a.   We all care, there is just a couple of staff that are totally invested and interested in sustainable living in all aspects of their lives

10) What opposition did you face regarding how effective your new cleaning techniques would protect student and staff health? (i.e.: preventing colds)

       a.   Doesn't smell very clean – "Mike said if you can't smell anything then it is really clean!" that's our goal and job

11) How did you deal with the opposition that you were facing?

       a.   Put together an irrefutable presentation with industry and company claims – capabilities, how it would work, what it would do, other institutions are using this – list of local groups that are using ActiveIon and steam vapor – and Swedish Hospital

       b.   put in test results with charts and graphs

       c.   Did a kick off for the program – had people talk about it – addressed issues through presentation, white paper – have not had any opposition

       d.   Used a buy in situation: you guys are the best so we want you to have the best – no real opposition to the current program

       e.   Steam mopping there was a little bit – just told them that they need a work path, just mop like normally would

Related future projects?

12) What is steam vapor cleaning?

       a.   Another technology

b.   Dry steam vapor – water is heated in a boiler and it puts out a steam or dry vapor that dries quickly, heats up to 180 degrees – kills everything

c.   Developed steam mop so it is portable and user friendly in the field- we purchased 3 of those units and plan is to get enough for the rest of the team

**All of our machines do not use shampoos; we use water to clean carpets, use ActiveIon water for spots

13)How effective is steam vapor cleaning compared to using chemical cleaners?

a.   Just as effective as or more effective than cleaners and solvent based cleansers

14) What challenges are you facing with trying to implement this cleaning program?

a.   Having the money to purchase the units

b.   We are 100 % ActiveIon now… steam mops have to get one at a time – all of this needs to be budget neutral – there has to be a payback that recoups the cost- save money from not purchasing chemicals anymore

15)What surfaces can accept steam vapor cleaning?

a.   Works on all surfaces – upholstery, hard surfaces, carpet, permeable surfaces, wood flooring, and bathroom stalls

Research Project

16) What cleaning techniques does your department use that can be used by students and staff in their own homes?

a.   HOM home based ActiveIon and use it

b.   Granny's green cleaning techniques: Newsletter sent out to cleaning staff
    i.   Vinegar
    ii.   Baking soda
    iii.   Natural products
    iv.   Rinse able made from natural substances
    v.   Need to be concerned about indoor air – good vacuum!!!
    vi.   Use of cold water and laundry and not using strong chemicals in laundry is causing more fecal contamination in the house--- more in kitchen than on toilet seat

17)What, if any, sort of sustainable topics would you like to know more about?

a.   3 of 4 LEED buildings on campus : would like to more about what LEED points cleaning as a presentation

18) Are there any sustainable living topics that you foresee needing addressed for communities located around WWU?

a.   We need to concentrate on recycling and composting- need to make it available to people, put up stations to make it more accessible, separation stages

b.   More education on what is compostable and what isn't

c.   Using public transit – bike friendly campus – more bike paths and bike lanes the better and bike riding

d.   Walking and not bringing cars onto campus

2.4.1 Insider Interview - Claudia

1. What is your Position/Title?
   a. She is the Manager of the Environmental Sustainability and Stewardship Office at the University of Washington.

2. What kind of basic information do you think would be useful for students, staff, and faculty who want to live more sustainably?
   a. Local resource list, public transportation info, how to buy sustainably

3. Do you think this is a resource that people would refer to? Would UW students refer to this resource?
   a. Claudia and her office had recently attempted to create a similar website. However it got scratched during the university's website reformatting because it wasn't getting much use. They plan on re-launching soon.

4. What would the major obstacles be if someone was attempting to implement this project at the UW?
   a. Marketing, was their big downfall. They didn't advertise theirs well. But they are trying again now. Working with committees, student groups, and their marketing department. They also suggest a key way to market is to get on all the different newsletters that circulate campus.

5. Do you see this as something that could eventually be a community wide resource? How would we get to that point?
   a. Who would say no?....Claudia believes the first step is showing that the site gets a lot of users. Then seeing if it could be expanded.

6. What do you think would be the best way to market the site, in order to get the most people to use it?
   a. Her suggestion is to use the newsletters that already exist.

7. How would a resource like this be Received/Perceived at the UW?
   a. Claudia believes, like we do, that this kind of all in one sustainability resource is rare, and would be well received by students and staff and faculty at the UW.


### 2.4.1 Insider Interview - Mike Aday

Contact name & position

a.   Mike Aday – Webmaster, CTO and VP of Engineering at 1000Museums, President and CEO at Notorious Ventures

Purpose of the project?
   . Recently created website for a new venture company "1000Museums" and has been doing similar projects all his life. The website is made for costumers, possible business associates (aka museums), and stakeholders to understand the company and get them involved.

"Size" & cost of the project?
   . $4500 – Pretty low for cost of professional website but there are not advanced features besides being able to purchase art and they hired people from within the company. They had both a website architect and Mike, the engineer, working on the website.

Timeline for project?

- 6 Months – the core was set up after 6 months but the site it constantly being added to as the company grows and more museums sign on to be a partner.
    Players/stakeholders involved?
  - Any/ all museums involved, companies and people who helped finance the start up, current employees.
    Reception/perception of the project of the stakeholders?
- Loved the website and are really happy with the way it looks/ how easy it is to get to the art that you want. Museum, collection, artists, etc are separated out making it easy for anyone to find what they are looking for and buying is a simple check-out process.
    Biggest challenges? (at least three)
- Organizing the info- making sure the useful information was right in the front and details were easy to find but didn't take over the page
  a. Compatibility – (I don't think this will be a huge one for us). There was many issues trying to get all the graphics and purchasing capabilities compatible with all browsers. In the beginning they frequently got calls from disgruntled costumers not able to buy their piece.
  b. Readability – had to pay attention to font sizes and information for stakeholders because if they have to struggle to read it they won't. None of the graphics are moving so fast as to be distracting and all headings are equally appealing to the eye.
    If you could do the project over again, what would you do differently/what advice do you have for our team?
- Don't try to write too much! It will be tempting to include all the useful info we find but it will be way too much unless it is really well organized. Don't be too patient – go out and make sure the website is being used right away and focus on making it more accessible/ more pertinent information.
    How is the project progressing now?
- Done with the exception that they are adding new museums whenever they partner but they have a simple way of doing it now so it's quick.

3.1 Screen shot of Stanford's "Sustainable Choices" Front Page
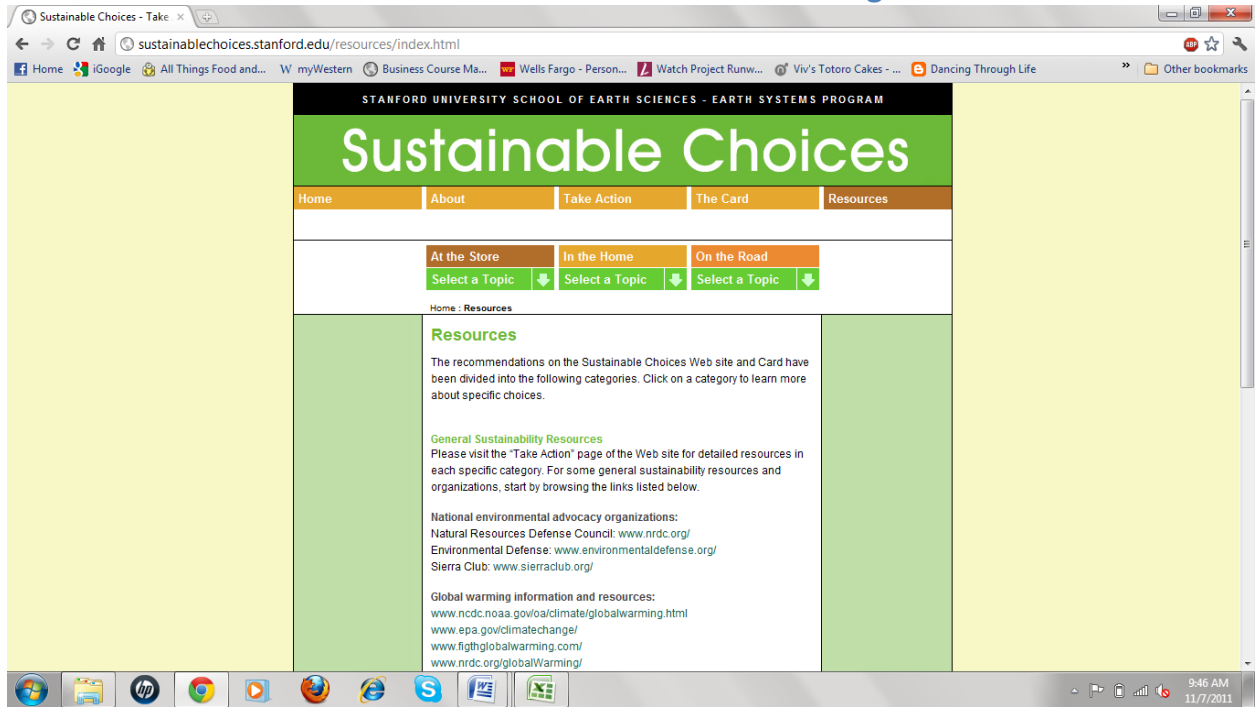
3.2 Screen shot of Oregon State University's Sustainability at OSU Page
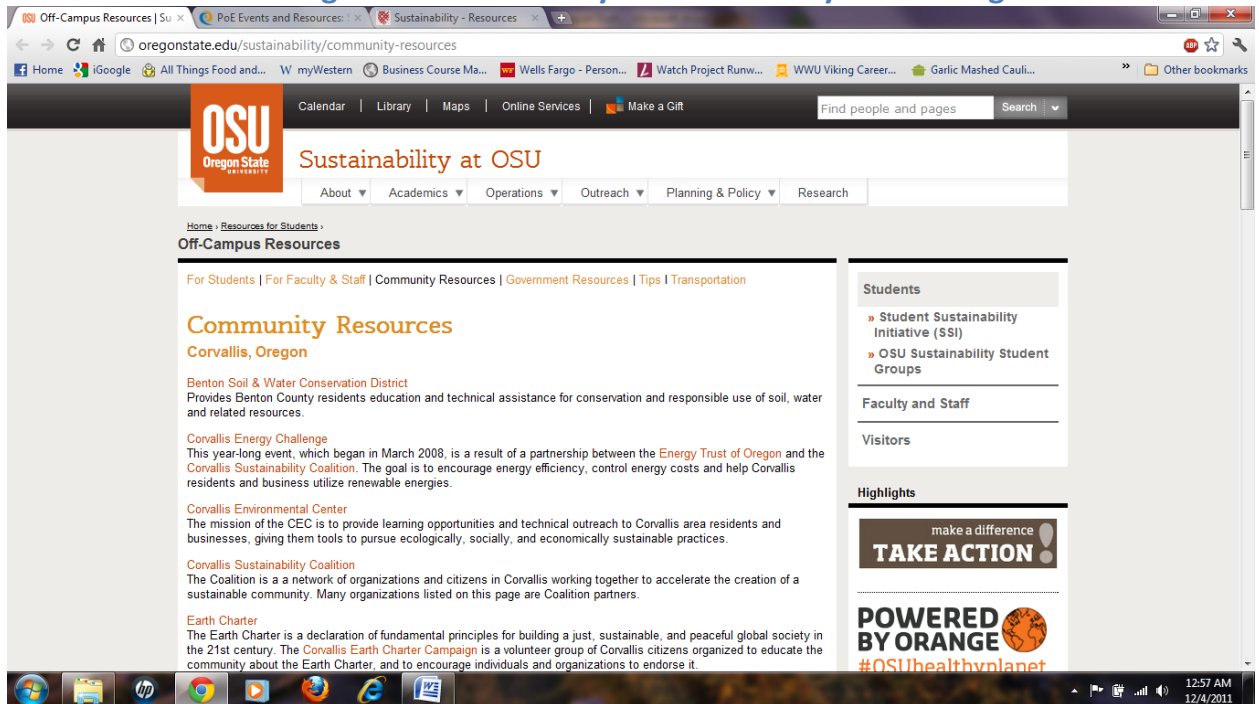
3.2 Screen shot of Macalester College: Sustainability at Macalester Page