

# Sustainability Signage



Emily Berend and Mandy Ekstrom

# Project Description

- Western Washington University Campus
- Not much signage regarding sustainability
- Many projects completed that aren't known



# Statement of Need

- Label sustainable features
- Unclear info on current signs
- To inform
  - community, students, staff, and faculty
- Case studies show positive results



# University of Washington

- University of Washington
  - No consistent form of signage
  - Not currently tracking results
- Students are given a brochure of how UW is being sustainable
- Sustainable Action Fund
- Budget of \$43,000
- No timeline, more of a case by case basis



**WASTEWATER**  
7 miles away

**Making our um... waste useful**

Wastewater from County parks and other areas flows through a network of pipes to the Yass Point Wastewater Treatment Plant in Clallam Park where it is cleaned and turned into purified, safe and usable water. Some of the waste water is being held in the south of Clallam and some is being transported and up to 1000 gallons.

**SCREENS**  
WASTEWATER  
TRASH  
Trash and wet "high-moisture" organics are screened out and sent to the landfill in Clallam.

**SEPARATOR**  
LIQUID  
BIO-SOLIDS  
Solids are distributed to land and used as fertilizer in the landfill in Clallam.

**GENERATOR**  
METHANE  
ELECTRICITY  
The plant captures 60-70% of the methane gas produced. This gas is then used to generate electricity. The liquid component of the methane gas is used to produce liquid methane which is injected into the waste.

**CHEMICALS**  
The natural chemicals used to clean wastewater don't break down much more than they are used to clean. They also don't break down and end up in the ground or in the water.



**SUSTAINABLE STADIUM** Understanding how the stadium connects to help students as path toward long-term sustainability

Sustainability is an important part of UW's mission, and here is a report on the progress of the stadium project. The report shows the progress of the stadium project and the stadium's healthy and sustainable design. The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building. The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building.

**WIND PLAYS A ROLE IN MAKING HUSKY STADIUM EFFICIENT!**

**WATER PLAYS A ROLE IN MAKING HUSKY STADIUM EFFICIENT!**

**ENERGY PLAYS A ROLE IN MAKING HUSKY STADIUM EFFICIENT!**

**WASTEWATER PLAYS A ROLE IN MAKING HUSKY STADIUM EFFICIENT!**

**HOW WE CONSUME, HOW WE CONSERVE:**

WATER CONSUMPTION: The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building. The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building.

ENERGY CONSUMPTION: The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building. The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building.

WASTEWATER CONSUMPTION: The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building. The stadium is designed to be a model of sustainability, with a focus on energy efficiency, water conservation, and green building.

# University of Maine at Farmington

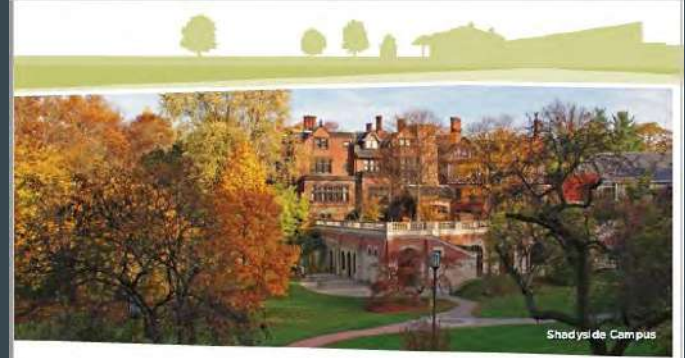
- \$2500
- Permanent plastic signs
- 2 years of designing

**“...received numerous positive comments about the signs on campus...”** - Lucas C. Kellett, PhD,  
University of Maine at Farmington



# Chatham University in Pennsylvania

- Lots of sustainability tours
- Big reason why students choose this school
- Signs tell a story to get people more interested
- Had issues with signs falling apart



## CHATHAM AND SUSTAINABILITY

Chatham is the alma mater of *Silent Spring* author and environmental icon, Rachel Carson '29. *Silent Spring* is widely credited with igniting the modern environmental movement, and *Time* magazine named Rachel to their list of the 100 Most Influential People – and 25 Most Powerful Women – of the 20th Century. For half a century, Carson has been the patron saint of Chatham University. Her inspiration has led Chatham to become a world leader in its environmentally responsible practices. Chatham is among the 21 colleges and universities that received a perfect score (99) in *The 2016 Princeton Review Green College Honor Roll* and is also ranked in the top five nationally for sustainability achievements in the Sustainability Tracking, Assessment & Rating System™ (STARS), placing us as one of the highest ranked private college in the United States.



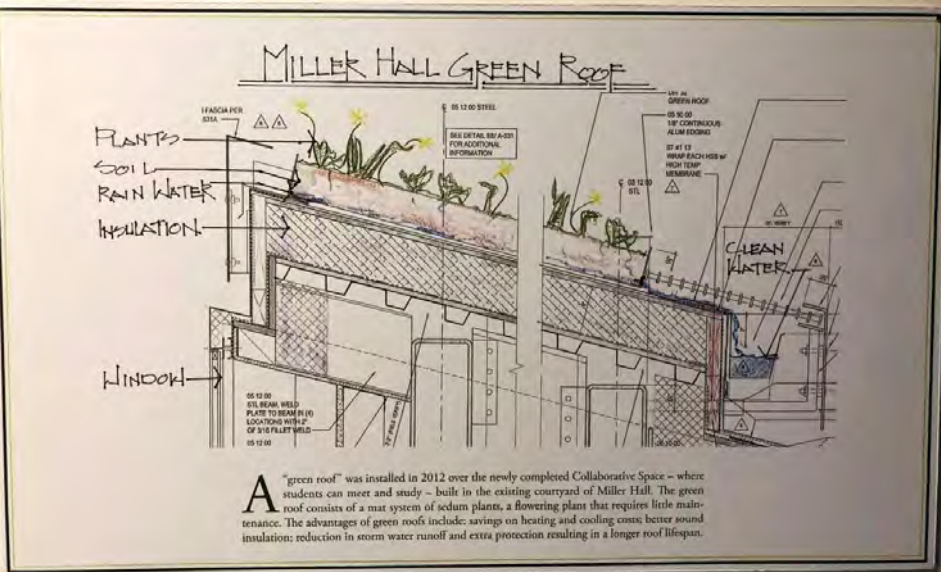
*"EHC is a living-learning community on one of the world's most sustainable campuses where we develop leaders of today and tomorrow to tackle some of the most pressing issues facing our planet."*

—David Finagold

# Current Campus Signage



# Miller Hall Green Roof



A "green roof" was installed in 2012 over the newly completed Collaborative Space – where students can meet and study – built in the existing courtyard of Miller Hall. The green roof consists of a mat system of sedum plants, a flowering plant that requires little maintenance. The advantages of green roofs include: savings on heating and cooling costs; better sound insulation; reduction in storm water runoff and extra protection resulting in a longer roof lifespan.



# Concert Hall Lighting Project



 **Concert Hall Lighting Project**

**SUSTAINABLE ACTION FUND**  
Your Money & Your Campus & Your Community

FUNDED BY  
The Sustainable Action Fund Grant Program, a student-funded program that increases the campus' sustainability impact and engages the wider community of sustainability advocates.

**WESTERN** 

OFFICE OF  
**sustainability**

Facilities Development & Capital Budget 

EDITORS  
Jesse Burt  
Vince Elliott  
Hannah Parsons  
Fred Darnley  
Lee Burt  
Derek Lewis  
Molly Webb

The Concert Hall Lighting Project, funded by the Sustainable Action Fund, replaced the incandescent lights in the Performing Arts Center Concert Hall with cutting edge, high efficiency LED lighting. It is expected to produce an estimated 62% annual energy savings.

**DID YOU KNOW?**

- This project will have an estimated annual savings of approximately 136,767 kWh per year
- A light emitting diode, or LED, is a type of solid-state lighting that uses a semiconductor to convert electricity into light
- Unlike incandescent bulbs, which release 90 percent of their energy as heat, LEDs use energy far more efficiently with little wasted heat
- LED lightbulbs contain no mercury

# Wade King Recreation Center





# SOLAR DEMONSTRATION PROJECT

First envisioned by the Western Washington University Students for Renewable Energy Club in 2006, the Solar Demonstration Project you see on the roof of the Viking Union (to your right) is the result of a collaborative effort between WWU Students for Renewable Energy, Bonneville Environmental Foundation, Alpha Energy, Puget Sound Energy and WWU Foundation. Support for the project was also provided by President Karen Morse, WWU College of Sciences and Technology and WWU Facilities Management.

This solar-electric system features a 2 kW array of twelve photovoltaic modules capable of producing 1,940 kWh over one year, or the equivalent of the average electricity required by two campus desktop computers in one year.

This project is one of many ways that the University incorporates sustainability into operations and academics.

For more information and real-time data visit the informational kiosk inside the Viking Union (south entry)



Photo: Greg Gaudin

# LED Lighting in C West Parking Lots

The Sustainable Action Fund Grant Program awarded funding for the retrofit of the C West parking lots lighting fixtures with light emitting diode (LED) lighting fixtures. Twenty 230 watt fixtures were installed in the north lot, and seven 86 watt fixtures were installed in the south lot. The goal is to pilot the effectiveness of these energy efficient lights and see if they would be appropriate for other parking areas on Western's campus.

## HOW DO THESE LED LIGHTS BENEFIT WESTERN'S CAMPUS?

Compared to the lamp posts in other parking lots with high pressure sodium (HPS) lighting, on average each lamp post with LED lighting:

- Saves 400 kilowatt hours per year
- Uses 32% less energy
- Saves \$30 per year

## USE LED LIGHTING AT HOME! LED LIGHTS

- provide similar light quality to traditional incandescent lights
- last 25 times longer than traditional incandescent lights
- use less energy than compact fluorescent bulbs (CFLs)
- contain no mercury



### FUNDED BY

The Sustainable Action Fund Grant Program: a student-funded program that increases the campus' sustainability impact and engages the campus community in sustainability awareness.



Facilities  
Development &  
Capital Budget



### PARTNERS

Philip Grant Bowman Class of 2011

Jaime Uljegren Winter 2012

William Clancy Winter 2011

Neil Baumgard Class of 2013

Matt Schimmel-Bristow Winter 2011

Brooke A. Love Faculty Advisor, Husley  
Department of Environmental Science

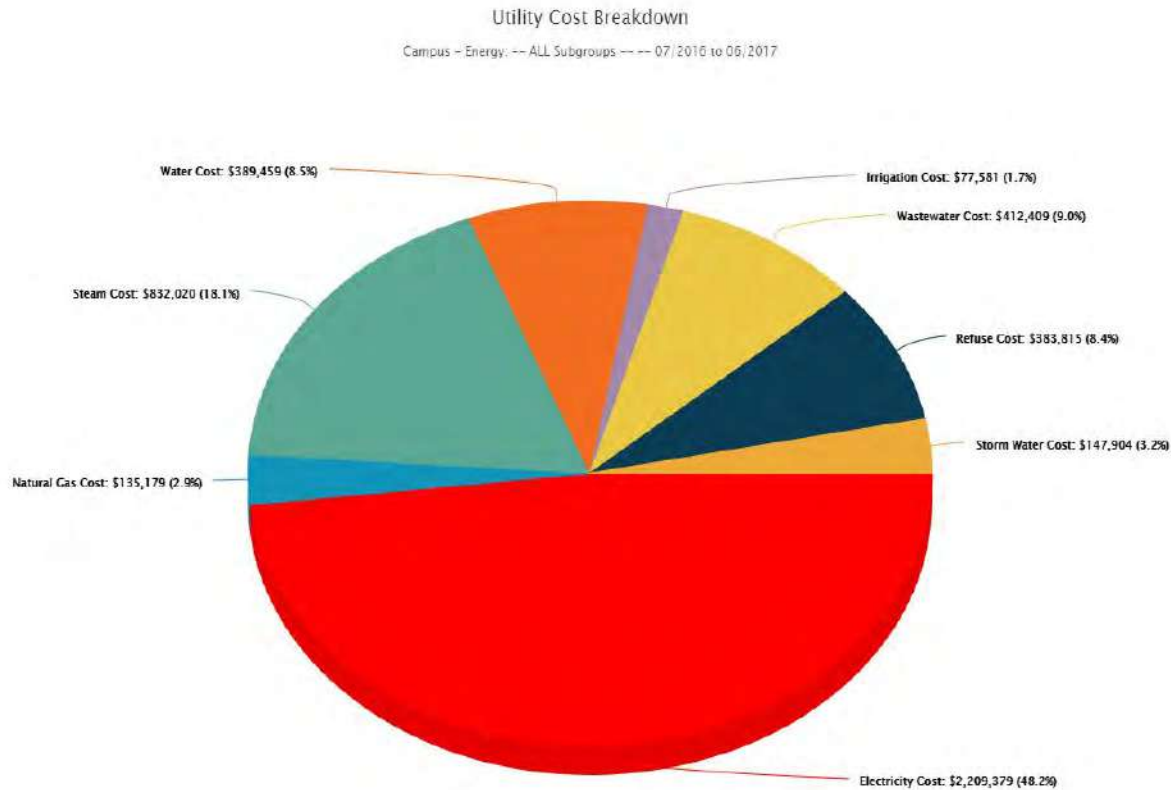
## Sustainability Related Points-of-Interest Around Campus

- Upcoming Events
- Bike Parking
- Fixit Stations
- LEED Buildings
- SAF Projects
- Compost Bins
- Water Bottle Refill Stations**
- Steam Plant



# Interactive Ideas

- Wyatt Catron
  - Western's energy dashboard on an interactive screen showing the costs/usage of running each building
  - Incorporate our ideas of sustainable projects onto interactive screen



# LEED Certification

- Miller Hall Gold Certification
- Academic Instructional Center Silver Certification
- Wade King LEED Certified



# Interview with Gene Myers

Gene Myers: Ph.D. Professor at Western Washington University

- Only signage for projects of highest value
- Consistency
- LEED





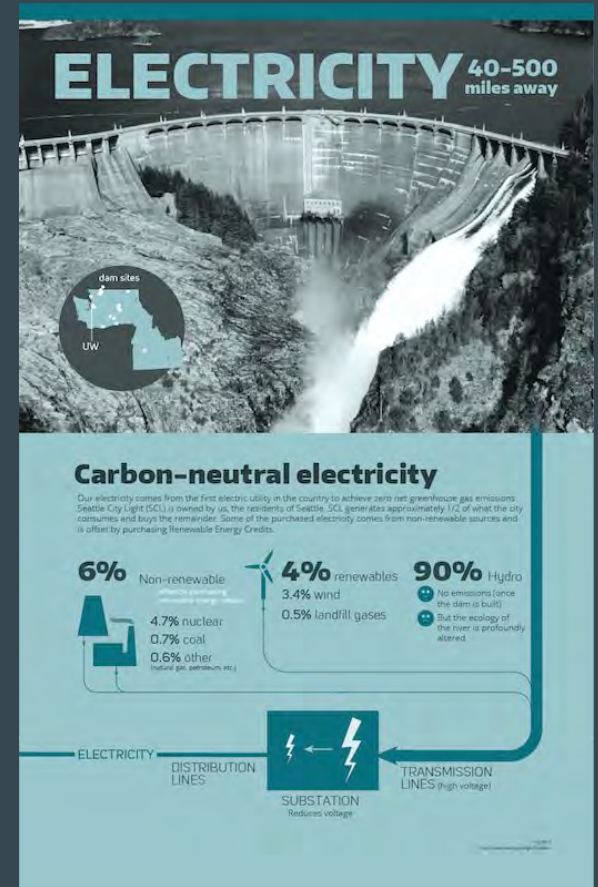
# Budget

- Roughly \$5,000 for physical signage
  - This number includes some new signs and updating preexisting signs
- LEED Certification
- Sustainable Action Fund



# Our Suggestions

- Update existing signs/electronic platforms
- Work with Energy Dept. at WWU
- Add more sustainability info to tours
- Interactive dashboard in high traffic areas



# Challenges

- Lack of responses
- Budget/what should it be
- Where to put signage
- Keeping signage maintained and relevant
- Is signage a good idea?



# Conclusion

- Inform public about sustainability
- Get people involved
- Show off WWU's sustainable projects
  - Limit physical signage
  - Updated digital signage



Thank you!