Eco-Dawg Book









Sustainability. It's the Washington Way.













Green.washington.edu



University of Washington
Environmental Stewardship & Sustainability

UW and Sustainability

What is this binder about?

This binder showcases information about how the University of Washington is being "green." Many sectors within the UW campus contribute efforts to create a more environmentally friendly campus. However, not all of the work and initiatives are known by the general public. Therefore, this material will provide some information as to what is going on at UW related to the environment and sustainability.



Note: this information will be updated throughout the year, so be sure to check it out again next time you are around.





UW Environmental Stewardship & Sustainability Facts 2013

The Environmental Stewardship & Sustainability (ESS) office, formed in 2008, supports the Environmental Stewardship Committee (ESC) and work on the Climate Action Plan (CAP), coordinates and promotes sustainability information and programs by engaging, educating and involving students, faculty, and staff in activities across the university, and oversees the Campus Sustainability Fund. ESS is also responsible for gathering and reporting the University's sustainability data for the UW Sustainability Dashboard and for rating groups such as STARS, Sierra Club, Princeton Review, and the International Green Awards. ESS facilitates projects including Paper Reduction, Green Office, Lab and Housing Certifications, District Energy, and PC Power Management.





Brief UW Environmental History

- 1971 UW Students celebrate 1st Earth Day and hold a trash-in demonstration to raise awareness of waste
- 1973 Institute for Environmental Studies established
- 1988 Power Plant conversion from coal to natural gas
- 1995 Task Force on Environmental Education established
- 2000 Program on the Environment develops from the Task Force on Environmental Education
- 2004 UW Environmental Stewardship Policy Statement created Environmental Stewardship Advisory Committee (ESAC) established to support policy statement
- 2005 Greenhouse Gas Inventory completed for UW
- 2007 President Mark Emmert signs the American College & University Presidents Climate Commitment (ACUPCC), as a charter member
- 2008 Environmental Stewardship & Sustainability office created by Senior Vice President V'Ella Warren
- 2009 UW Climate Action Plan submitted to ACUPCC Husky Green Fund established for philanthropic donations College of the Environment established Husky Green Awards established to recognize students, faculty and staff
- 2010 Student-initiated Campus Sustainability Fund (CSF) launched First annual UW Sustainability Summit organized by Environmental Stewardship & Sustainability and the Campus Sustainability Fund UW hosted the Pacific Northwest Regional Sustainability Roundtable
- 2011 UW Sustainability Dashboard launched
- 2012 ESAC restructured into the Environmental Stewardship Committee (ESC) UW President Young signs Executive Order for Environmental Stewardship and Sustainability

Sustainability: It's in our nature.

UW Environmental Stewardship & Sustainability Facts

Sustainability Awards & Recognition 2012

- Achieved STARS Gold rating in 2012
- Ranked 4th in 2012 Sierra Club Magazine Cool Schools list
- Received a top score of 99 on the Princeton Review's Green Rating, placing UW on the Green Honor Roll
- Received Seattle Business Magazine's 2012 Washington Green 50 Award
- Received a bronze medal in the 2012 International Green Awards
- Remains the largest Salmon-Safe certified institution in Washington state
- Received a WasteWise Honorable Mention award from the federal Environmental Protection Agency
- Awarded a gold medal for waste management by the National Association of Colleges and Universities
- Named a Bicycle Friendly University by the League of American Bicyclists





Major University Accomplishments

- 5.6% reduction in Green House Gas emissions since 2005
- 57% waste diversion rate, saving \$1,229,505 in 2012
- 81% of University population commutes using alternative modes of transportation
- \$12.83 Million saved on utility conservation efforts in 2012
- 54% of Housing and Food Services (HFS) budget spent on locally grown or processed food
- 100% of HFS service ware and packaging is compostable
- 100% of power purchased from Seattle City Light comes from renewable sources
- All new buildings will meet or exceed LEED Silver building standards

Campus Sustainability Fund

\$330,000 is currently allocated from Student Activities Fees; a seven-member student committee distributes funds to student-led campus sustainability projects. CSF projects have engaged with Registered Student Organizations, academic departments, and administrative offices in order to improve campus sustainability. One of CSF's most important tasks is brokering relationships between campus units that empower students and expand student leadership opportunities. CSF has distributed over \$600,000 to date. CSF is managed by a half-time graduate student assistant position and a quarter-time student engagement outreach coordinator both housed within the ESS office.

Key Environmental Stewardship & Sustainability Office Initiatives

<u>Climate Action Plan</u> – reaching 15% reduction in greenhouse gas emissions by 2020. ESC sub-committees are currently developing policies for buildings, computing and land use.

<u>PC Power and Patch Management</u> – lowering desktop power usage, reducing greenhouse gas emissions, measuring cost-avoidance, improving PC security with patch management and reducing PC Management costs. <u>Paper Reduction</u> – reducing the University's paper use by 30% and purchasing only 100% recycled paper, as mandated by state law.

<u>Green Certification Programs</u> – recognizing sustainable office practices, offering advice on areas of improvement and encouraging sustainability competition and collaboration throughout offices, laboratories, Residence Hall rooms and Greek housing.

| Website Links |
|---|
| Environmental Stewardship & Sustainability: http://green.washington.edu |
| Environmental Stewardship Committee: <u>http://esc.washington.edu</u> |
| Sustainability Dashboard: http://green.washington.edu/metrics |
| Campus Sustainability Fund: <u>http://csf.washington.edu</u> |
| Campus Sustainability Partners: <u>http://green.washington.edu/partners</u> |
| Facebook: https://www.facebook.com/UWSustainability |
| Twitter: https://twitter.com/sustainableUW |
| YouTube: http://www.youtube.com/sustainableUW |
| |



Rapidly changing interactions between the Earth's environment and human activities drive the research and teaching at the University of Washington's College of the Environment. By connecting some of the world's leading educators and researchers with students, practitioners, and citizens, the College cultivates communities who work with and learn from each other as they tackle the environmental challenges of the 21st century.

THE COLLEGE

- The College is a world-class environmental hub focused on improved understanding of the interactions of the earth's environment and human activities.
- Public and private support in excess of \$120 million annually support world-renowned research on climate; marine, earth, and space processes; ecology; and natural resource management.
- Over 20 degree programs, ranging from bachelor to doctoral, with over 350 degrees awarded annually.

ACADEMICS & RESEARCH

Degree-granting units

School of Aquatic and Fishery Sciences • Department of Atmospheric Sciences • Department of Earth and Space Sciences • Program on the Environment • School of Environmental and Forest Sciences • School of Marine and Environmental Affairs • School of Oceanography

Selected research and outreach centers

Climate Impacts Group • Joint Institute for the Study of Atmosphere and Ocean • Neptune Regional Scale Nodes (Ocean Observatories Initiative) • Program on Climate Change • UW Botanic Gardens • Washington NASA Space Grant Consortium • Washington Sea Grant

Selected facilities and field stations

Alaska Salmon Program • Center for Sustainable Forestry at Pack Forest • Friday Harbor Laboratories • Pacific Northwest Seismic Network • Research Vessel *Thomas G. Thompson* • Wind River Field Station

STUDENTS



TEACHING & LEARNING

- Students choose from 9 undergraduate and 13 graduate degrees, 9 minors, and 3 certificate programs.
- 450 course offerings annually.
- 10 undergraduates selected as Mary Gates Scholars (2010–2011).
- Capstone projects that help students integrate knowledge, concepts, and skills acquired during their studies.
- 9 UW Distinguished Teaching Award winners.

ALUMNI

More than 14,000 alumni from academic departments and schools that form the College of the Environment live in all 50 states and 75 countries.



Environmental leadership. It's the Washington way.



FACULTY AND STAFF

- More than 600 faculty and research and administrative staff work in the College.
- More than 175 award-winning faculty include: American Academy of Arts and Sciences Fellows (4) American Association for the Advancement of Science Fellows (19) American Geophysical Union Fellows (19) Fulbright Fellowships (5 since 1998) Heinz Foundation Award for the Environment (2005) MacArthur Foundation Fellow (2008) National Academy of Sciences Members (5) National Science Foundation Presidential Young Investigator (1) Presidential Early Career Awards in Science and Engineering (2) Volvo Environment Prize (2006) Washington State Academy of Sciences Members (11)

RESEARCH

- Research conducted "from the core to the cosmos" on all 7 continents and in all 5 oceans.
- 17 interdisciplinary research and outreach centers and over 70 laboratories, research groups, and cooperative programs.
- Selected areas of research include climate and weather; sustainable forestry; urban ecology; invasive species; earthquakes, volcanoes and tsunamis; salmon fisheries; ecosystem-based management; and development of underwater observatories.

COLLABORATION & SERVICE

- Faculty serve as advisors to local, regional, national, and international organizations, including the Pacific and North Pacific Fishery Management Council, the International Whaling Commission, and the United Nations' Inter-governmental Panel on Climate Change.
- Co-sponsors, with the Foster School of Business and the College of Engineering, an annual Environmental Challenge where interdisciplinary teams of students develop solutions to environmental issues that can compete in the marketplace.
- Citizen science programs, K–12 resources, and public education programs serve the citizens and students of the region.

FINANCIAL

Grants and Contracts (2011) State Support (2011) Private Support (2011) Endowment Value (1/1/12; #=234) \$121 million\$28.5 million\$10 million\$66 million

LEADERSHIP

Lisa Graumlich, *Dean* Bruce Nelson, *Associate Dean for Research* Julia Parrish, *Associate Dean for Academic Affairs and Diversity* Stephanie Harrington, *Assistant Dean for Planning and Initiatives* Marilyn Montgomery, *Assistant Dean for Advancement*

Executive Committee

Thomas Ackerman, Director, Joint Institute for the Study of the Atmosphere and Oceans
E. Virginia Armbrust, Director, School of Oceanography
David Armstrong, Director, School of Aquatic and Fishery Sciences
Penelope Dalton, Director, Washington Sea Grant
Dale Durran, Chair, Department of Atmospheric Sciences
Tom Hinckley, Interim Director, School of Environmental and Forest Sciences
Tom Leschine, Director, School of Marine and Environmental Affairs
Greg Miller, Chair, Department of Civil and Environmental Engineering, College of Engineering
Clare Ryan, Director, Frogram on the Environment
Ken Sebens, Director, Friday Harbor Laboratories
Robert Winglee, Chair, Department of Earth and Space Sciences

Advisory Board

Maggie Walker, Co-Chair, Civic Volunteer Doug Walker, Co-Chair, Civic Volunteer, and retired software CEO Brian Baird, former Member of Congress (WA-3) Jabe Blumenthal, Co-Chair, Climate Solutions and Co-Founder & Co-Chair, Washington Progress Alliance Nelson Del Rio, Chairman, The Del Rio Family Foundation and Principal, Sonnenblick Del Rio Gene Duvernoy, President, Forterra John Eyler, Retired President and CEO, Toys R Us Denis Hayes, President and CEO, The Bullitt Foundation Martha Kongsgaard, President, Kongsgaard-Goldman Foundation and Chair, Puget Sound Partnership Leadership Council Colin Moseley, Chairman, Green Diamond Resource Company William Ruckelshaus, Strategic Director, Madrona Venture Group and former Administrator, Environmental Protection Agency Christopher Williams, Acting Superintendent, Seattle Parks and Recreation

CONTACT INFORMATION

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| email | coenv@uw.edu | |
| web | http://www.coenv.washington.edu/ | |

UW LEED Certified Buildings

What is LEED?

According to the US Green Building Council, "LEED, or Leadership in Energy and Environmental Design, is an internationally recognized green building certification system."

"LEED promotes sustainable building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance."

LEED has four levels: Certified, Silver, Gold, and Platinum.

To learn more about UW's LEED buildings, visit:

http://f2.washington.edu/cpo/sustain





Benjamin D. Hall Interdisciplinary Research Building

LEED-CI v1.0



The Benjamin D. Hall Interdisciplinary Research Building achieved LEED Gold certification as a core and shell project in March, 2006. This project is an example of the Design-Build-Operate-Maintain process where the design and construction teams and the building operator collaborated to develop the building from conception through 50 years of operation in order to most efficiently manage resources and costs. The original site for this building was a contaminated urban infill, used as a parking lot. The site now serves a greater purpose providing 115,000 square feet of space as research facilities. The building takes advantage of its location through the use of natural day lighting strategies, views of Lake Union and Downtown Seattle, with access to the Burke-Gilman trail.

Key objectives included:

- Maintaining occupant comfort,
- Permanent-monitoring systems to provide feedback of ventilation system performance
- A high level of lighting control allowing users to adjust lighting to comfort levels





Lab Work Space

| Stats: | |
|---------------|-------------|
| Completed: | Oct. 2007 |
| Location: | Seattle, WA |
| Project Size: | 150,989 GSF |



Savings:

Annual Electric\$53,104Annual Water\$5,002Construction Waste\$442,087





Convenient Access to the Burke Gillman Trail

Center for Environmental Genomics

The Benjamin Hall Building is home to the Center for Environmental Genomics, which serves the School of Oceanography in researching marine microbial populations, and is an example of a tenant build-out project to the core and shell space. The Ecogenomics lab achieved LEED Gold for Commercial Interiors.

Some of the sustainable features include:

- Lighting controls for reduced energy consumption
- Use of recycled materials
- 100% outside air delivery
- Use of low VOC emitting materials



Architectural Model

Clark Hall

LEED-NC v2.1



Clark Hall was originally constructed in 1899 and was the third building on the UW campus. During its lifetime, Clark Hall has served many purposes including: a women's dormitory, a student union building, and since 1951 it has served numerous military programs for the Army, Air Force, and Navy ROTC.

Clark Hall was one of the UW's Restore the Core Projects and was awarded LEED Silver in July 2009. In order to achieve this certification Clark Hall includes many sustainable retrofits including:

- Maintaining the historic façade of the building
- Seismic retrofits
- Upgraded building mechanical and electrical systems
- Remodeled interior spaces
- Use of district energy (DE) through the utilization of the UW central steam system to heat the building
- Additional energy saving strategies include utilizing day lighting, natural ventilation, and a building envelope of thick masonry walls that insulate the building
- Water reduction strategies to include high performance fixtures; a more sustainable landscape including native and adapted plants amounting to a 50% potable water savings



N.E. Corner of Clark Hall



Automatically controlled naturally ventilating windows

| Stats: | | |
|---------------|-------------|--|
| Completed: | June 2009 | |
| Location: | Seattle, WA | |
| Project Size: | 30,568 GSF | |



Savings: Annual Electric

Annual Water\$2,913Construction Waste\$26,349

\$1,465





N.E. Corner of Clark Hall Fitness Area



Showing Layers of Structural History



First Floor Classroom

Floyd & Delores Jones Playhouse Theatre

LEED-NC v2.1



The original Playhouse Theatre, located in the West Campus section of the Seattle campus, was constructed in 1931, acquired by the UW in 1951, partially renovated in 1968, and completed a major renovation in 2008, which achieved a LEED Gold rating. One major change is the roof of the original Playhouse was replaced with an elevated roof, which improved stage workability, acoustics, and lighting. The theatre is operated by the School of Drama and is the site of at least 6 student productions per year.

Various upgrades and sustainable features include:

- Improved seismic stability
- Upgraded building systems including mechanical and electrical systems
- Energy efficiency measures include: naturally ventilated lobby spaces, hydronic in-floor heating, and an under floor air displacement system in the seating area
- Low flow plumbing fixtures were used throughout to conserve water.



Under Floor Heating System Being Installed



Theatre Seating

| Stats: | | |
|---------------|-------------|--|
| Completed: | Oct. 2008 | |
| Location: | Seattle, WA | |
| Project Size: | 12,692 GSF | |



Savings:

Annual Electric\$13,224Annual Water\$4,257Construction Waste\$334,006





Lobby Operable Windows



Main Entrance



A Student Production in Progress

Johnson Hall

LEED-NC v2.0



Originally constructed in the 1930's, Johnson Hall was one of the UW's Restore the Core Projects and is recognized as a LEED Certified project. Johnson Hall is home to geological sciences, and consists of 60% lab spaces and 40% classroom spaces. During the integrated design process, the design teams completed numerous surveys to determine space needs based on function, and efficient ways to enlarge spaces for better circulation and larger classroom sizes.

This project was a pioneer in determining how the UW would upgrade and retrofit its historic buildings. Johnson Hall is a synthesis of a historic exterior and an upgraded interior designed to meet the needs of an ever-changing scientific environment, while maintaining the legacy of the Seattle campus.

Some of the high efficiency building highlights of this project are:

- Low VOC emitting materials
- Building reuse and removal of unhealthy materials
- Bicycle storage and changing rooms for building occupants
- Improved energy performance
- Construction waste recycling



North Facade

| Stats: | | |
|---------------|-------------|--|
| Completed: | May 2011 | |
| Location: | Seattle, WA | |
| Project Size: | 121,000 GSF | |



Savings:

Annual Electric\$32,123Annual Water\$4,962Construction Waste\$557,950





Large Lecture Classroom



Standard Classroom

Merrill Hall

LEED NC v2.20



Merrill Hall is home to the Center for Urban Horticulture and is the UW's first on-campus LEED-certified building, awarded LEED Silver in January, 2004. Merrill Hall replaced a building burned as the result of an arson attack. The construction of Merrill Hall was seen as an opportunity to pursue green building strategies, and the LEED process resulted from student support on campus. The building contains a variety of spaces including: lab research, classrooms, demonstration gardens, and areas for public workshops...

Some features are:

- A "structure as finish" approach utilizing exposed wooden materials
- Materials sourced regionally and salvaged from urban sources
- The building uses natural ventilation and daylighting to conserve energy
- A 9.6 Kilowatt solar panel array generates 9% of the building's power
- Water is conserved through rainwater capture, drip irrigation, waterless urinals, and low flow toilets.



Library

| Stats: | | |
|---------------|-------------|--|
| Completed: | Jan. 2006 | |
| Location: | Seattle, WA | |
| Project Size: | 18,495 GSF | |



Savings: Annual Electric

Annual Electric\$2,703Annual Water\$3,797Construction Waste\$52,674





Exterior of Student Commons



Student Commons



Rendering

PACCAR Hall

LEED-NC v2.2



On May 23, 2011, PACCAR Hall was awarded LEED Gold certification. The building includes numerous space types including: U-shaped tiered classrooms, meeting spaces, a 250-seat auditorium, student breakout rooms, faculty offices, a soaring atrium with a café, and a boardroom. The architecture features an extensive use of shielded glass that captures abundant daylight throughout the central atrium and common spaces, creating an overall airiness that integrates the visual environments between the indoor and outdoor spaces.

Some of the most striking features include:

Interior spaces, views, and entrances organized to create a strong sense of community engagement

A partial green roof to maximize energy savings, reduce the heat island effect (heat island effect describes the increase in temperature due to the built environment, the difference can be as high as 22oF at night) and create an aesthetically pleasing space on the outside balcony

Large interior spaces that are naturally lit, with day lighting for the majority of other interior spaces Efficient Heating Ventilation and Air Conditioning (HVAC) planning

Low flow fixtures to reduce water consumption



Interior Classroom



Student Lounge

| Stats: | | |
|---------------|--------------|--|
| Completed: | June 2010 | |
| Location: | Seattle, WA | |
| Project Size: | 132,845 GSF | |
| Cost: | \$87,500,000 | |



Savings:

Annual Electric\$13,224Annual Water\$4,257Construction Waste\$334,006





N.Entrance, and Native Plants



Partial Green Roof



Rendering of Student Cafe

William W. Philip

LEED-NC v2.2



William W. Philip Hall is a University of Washington Tacoma's assembly hall and is a gathering space for students, teachers, staff, and the greater community. The largest room serves 300 to 500 people, an increase compared to UWT's previously used Carwein Auditorium with a capacity of 162 occupants. Philip Hall is a contemporary building featuring expansive glass windows for views of Mount Rainier, Union Station, the Glass Museum and Commencement Bay. The student commons and 2nd floor Mezzanine are places that allow students to comfortably study and relax.

Design considerations consist of:

- Optimizing natural lighting
- Use of energy efficient technologies
- Water efficiency
- Construction waste recycling





Student Lounge

| Stats: | | |
|---------------|------------|--|
| Completed: | Nov. 2010 | |
| Location: | Tocoma, WA | |
| Project Size: | 20,250 GSF | |



Savings:

Annual Electric\$12,969Annual Water\$1,290Construction Waste\$15,700





Main Exibition Room



Main Exibition Room



Student Lounge

UW Recycling & Solid Waste

What is UW Recycling & Solid Waste?

UW Recycling & Solid Waste (RSW) is a UW department that "serves as a leader in sustainability by providing recycling and solid waste solutions to University students, faculty and staff, and the global community."

The department's mission includes providing "recycling and waste collection services to promote a safe and clean campus environment. [It] promotes maximum recycling and encourages minimum waste generation through education and outreach."

To learn more about UW RSW, visit:

http://www.washington.edu/facilities/building/ recyclingandsolidwaste/



Trash-In 2012 Summary

April 2012





On April 11, 2012, UW Recycling & Solid Waste hosted its annual "Trash-In", a mini sorting event where we explore how much recyclable and compostable material is still being thrown away on campus. The objective of Trash-In is to increase campus-wide awareness on the materials that make up our garbage waste stream. Results from the event are used to guide the development of future waste reduction programs and strategies.

Sorting categories:

- Compostables (including food scraps and compostable serviceware items)
- Mixed Paper (including cardboard)
- Mixed Containers (including cans, bottles, plastic dairy tubs, aseptic packaging, and non-compostable cups)
- Other (including Styrofoam, e.Media, plastic film, and Surplus items)
- Garbage

Data & Observations

- The breakdown of materials sorted remains fairly consistent with the past two Trash-In events in 2010 and 2011. This is reflective of two things: existing waste diversion programs are working – recyclable containers and paper made up fairly small portions of the overall garbage – but opportunities still remain to remove recyclables and compostables out of this waste stream.
- 2. The UW has a comprehensive composting program on campus but opportunities remain for capturing additional compostable items in public areas and buildings. With over half of the garbage sorted consisting of food scraps and compostable serviceware, this area will remain a focus for UW Recycling & Solid Waste when developing its waste diversion strategies.
- 3. A large portion of the compostable and recyclable material being thrown away on campus consists of coffee cups and plastic water bottles—two items that don't have to be used in the first place. To be true to the waste hierarchy, we should be encouraging folks to reduce their usage of disposable items by using durable/reusable ones instead.

Learn more... www.uwrecycling.com

Program Highlight SCRAM: STUDENT MOVEOUT

University of Washington



SCRAM donation stations allow students to donate reusable items when moving out of dorms.

Students Move Out

The University of Washington has an annual tradition of collecting unwanted items from students leaving residence halls at the end of each school year. The SCRAM program redirects reusable goods, such as food, books, clothing, household items, school supplies, toiletries and electronics, to charitable organizations instead of the landfill. More than 5,000 students live in the residence halls and move out at the end of spring quarter. SCRAM provides these students with a sustainable alternative to throwing things away.

In 2010, SCRAM donation stations were set up at seven residence halls from June 7 to June 14. The donation stations consist of a 10'x10' tent with various collection containers for reusable and recyclable materials. The Terry, Lander and Mercer stations were located in the same outside sites as in previous years. New in 2010, the donation stations at McMahon, McCarty and Haggett were located on internal patios, and Stevens Court was located in a covered shed. These collection stations were protected from weather and were more secure, accessible only by UW students and staff.

Program partners this year included Northwest Center (clothing and household goods), University District Food Bank, Books to Prisoners, Real Change (toiletries), Highline School District (school supplies), and InterConnection (electronics). This was the first year that electronics were actively collected and donated to a local non-profit.

Northwest Center and the University District Food Bank provided their own collection containers and collection service from each donation station. Recycling & Solid Waste monitored the other collection containers and consolidated the donations at a central location for pickup by the vendors after the event.

In 2010, a total of 7.68 tons of donations were collected. Recycling & Solid Waste also delivered 0.75 tons of donations, such as refrigerators and usable furniture, to UW's Surplus department for resale or proper recycling.



Trash bin signs urge students to rethink waste.



A student donates items at SCRAM



Recognizable booths draw student interest.



Program History

- 2003 Recycling & Solid Waste conducted a waste audit of the residence halls. Because of the large volume of reusable items found in the landfill-bound garbage, a proposal was approved by Housing and Food Services for Recycling & Solid Waste to run an end-of-the year donation program in 2004.
- 2004 The first year of the donation program was a partnership between Recycling & Solid Waste, the City of Seattle, and Housing and Food Services. Recycling & Solid Waste named the event *Summer Scram*, created the logo, produced marketing materials, and sorted the donations for pickup by program partners. The event ran for two weeks.
- 2005 This year partners were required to provide their own collection containers and regular pickup from the donation stations. Recycling & Solid Waste staff collected items that required special recycling or disposal.
- 2006 Recycling & Solid Waste staff continued to collect items that required special recycling or disposal. This year, 60 pounds of cleaning products and toiletries were collected from the donation stations, even though there were no designated containers for these items.
- 2007 Recycling & Solid Waste purchased tents (instead of borrowing them from the City), to use during Summer Scram. As in 2006, even though there were no designated containers, 110 pounds of cleaning products and toiletries were collected and donated to Real Change, a local nonprofit.
- 2008 Summer Scram was rebranded as *Scram: Student Moveout* with the tagline, *Can't Take It. Donate It.* New banners and promotional materials were created. Because of the increasing amount of incidental toiletries/cleaning supplies and school supplies found in previous years, collection containers were added for these items and donation partners were secured.
- 2009 A few pilot internal collection bins were placed at designated sites but they had high contamination rates and were not successful in capturing materials for donation.

Giving Back

Since SCRAM began in 2004, more than 65 tons of materials have been donated to local charitable organizations. The donations made by many of the more than 5,000 University of Washington students moving out of the residence halls each year provide much needed assistance to individuals and families located here in Seattle and beyond.



Northwest Center picks up charitable items from SCRAM.

Donation Totals

| | 2004-2009 Tons | 2010 Tons | Total Tons |
|--------------------|-------------------|-----------|------------|
| Clothing | 38.30 | 3.73 | 42.03 |
| Food | 4.76 | 0.47 | 5.23 |
| Books | 3.26 | 0.40 | 3.66 |
| Toiletries | 0.36 | 0.31 | 0.67 |
| School Supplies | 0.31 | 0.15 | 0.46 |
| Household Goods | 10.43 | 1.09 | 11.52 |
| Electronics | N/A | 1.52 | 1.52 |
| Tons Donated | 57.41 | 7.68 | 65.09 |

Program Highlight HUSKY FOOTBALL

University of Washington



Greening the Game

The 2010 home football season saw many exciting changes for the University of Washington's Intercollegiate Athletics department (ICA) and Husky Stadium, including the creation of its first "Green Team". The Green Team, in partnership with Recycling & Solid Waste, rolled out many new waste diversion initiatives for the season: a green logo, an in-game recycling promotion, public area composting, and participation in a national waste diversion challenge.



The new logo – *Go Purple. Be Gold & Green.* – was stickered on all stadium recycling carts and used on buttons and t-shirts for outreach volunteers.

The in-game promotion, the "Green Minute", took place at home games following the

third quarter recycling public service announcement (PSA). The PSA instructed fans to hand their recyclable beverage bottles to ushers who were staged at the end of each aisle during the Green Minute. Ushers also directed fans to use the new compost bins on the concourse for their food waste and compostable serviceware items.

Composting was expanded to public areas with the placement of 64-gallon compost carts on the stadium concourse, one next to every garbage and recycling bin. Recycling & Solid Waste worked closely with stadium vendors to help them purchase the required compostable packaging and serviceware items. Recycling & Solid Waste also designed custom posters for the stadium that showed actual items sold at food stands and their appropriate end-of-use waste stream: compost, garbage, or recycling.

The Blue Bag Recycling Outreach program continued in tailgating areas with volunteers from the Environmental



Stewardship & Sustainability office, Students Expressing Environmental Dedication (SEED), and Earth Club distributing approximately 2,500 blue recycling bags to tailgating fans. Plastic cups were accepted as part

of the "all-in-one" recycling stream in 2010.

Post-game stadium cleanup, "picking the bowl", was expanded to include collection of compostables in addition to recyclables. The few remaining materials, including candy wrappers, chip bags, and other non-compostable packaging items, were disposed of as garbage.

For the 2010 home football season, ICA reached an overall diversion rate of 42%, which includes the stadium, tailgating areas, and pre-game events. The diversion rate for the stadium alone was 51%, a direct result of the increased focus on composting, recycling, and fan awareness about Husky Stadium green initiatives.



Program History

- 2001 Prior to this season, only trash cans were provided throughout the tailgate areas. In 2001, Recycling & Solid Waste piloted a program for the collection of cans/bottles throughout the tailgate areas in cardboard containers.
- 2003 Blue plastic wheeled 64-gallon carts for cans/bottles recycling replaced the cardboard collection containers in the tailgating areas and were added to the entry gates and stadium concourses.
- 2004 Grey 64-gallon trash carts replaced trash cans in the tailgate areas. Recycling & Solid Waste took over setup and placement of the carts and provided a staff member on game day to address any overflow issues. Protocols for "picking the bowl" (collecting recyclables from the seating areas of the stadium during cleanup) were established.
- 2005 A pre-consumer food waste collection pilot program was implemented at each coffee stand, lemonade stand, select stadium concession stands, and the catering area at Dempsey Indoor Facility.
- A Blue Bag Recycling Outreach program was launched in parking lots adjacent to the stadium. A team of student outreach staff distributed blue recycling bags to tailgaters to make recycling cans/bottles and cardboard more convenient. The pre-consumer food waste program was expanded to include all stadium concession stands. Lids on 50 of the stadium concourse recycling carts were modified to allow for commingled, or "all-in-one", collection of cans/bottles, newspapers, and game programs.
- 2008 Recycling & Solid Waste transitioned stadium recycling program elements to Intercollegiate Athletics (ICA) Facilities staff, including setup and servicing of recycling carts within the stadium and food waste carts at each concession stand. In the parking lots, 96-gallon "all-in-one" recycling carts replaced the 64-gallon cans/bottles carts used in previous years. The Blue Bag Recycling Outreach program continued with students from campus environmental groups conducting outreach in the lots prior to each home game. The Sunday cleanup crew began collecting recyclables off the ground prior to the mechanical sweep of the lots.
- 2009 Recycling & Solid Waste partnered with Commuter Services to have parking attendants distribute blue recycling bags to drivers entering the tailgating lots.

Game Day Challenge

For the first time, Husky Stadium participated in the Environmental Protection Agency's Game Day Challenge, a national competition that highlights waste diversion efforts at college and university football stadiums. Husky Stadium had a 53% diversion rate during the October 30 home game against Stanford, ranking the UW 7th out of the 75 competing schools from throughout the country. (Note: the 53% diversion rate was only for the stadium and did not include tailgating or pre-game events.)

Among the 52 NCAA I-FBS schools, the UW ranked 3rd in waste diversion and 2nd for per capita organics reduction. Of the five PAC-10 schools competing, the UW ranked 1st in waste diversion.



Waste Diversion

45.0% 40.0% 35.0% 30.0% **Diversion Rate** 30.4% 25.0% 29.0% 27.9% 26.6% 20.0% 15.0% 10.0% 5.0% 0.0% 2006 2007 2008 2009 2010



Program Highlight PAPER RECYCLING

University of Washington





Full paper toters at a building's loading dock.

Paper: The Staple of Recycling

The University of Washington continues to expand its paper recycling program, which accounts for nearly a third of the total tons recycled on campus each year. Paper is collected in a mixed fiber stream that includes all clean, non-soiled paper and cardboard products.

The University's decision to keep paper separate from other recyclable materials across campus (except in residence halls) allows for the most efficient recycling, which requires clean recovered paper. Clean paper is sold for revenue that is used to lower operational costs and expand existing programs. In fiscal year 2010, the total revenue from the sale of paper and cardboard was more than \$71,000.

Workstations on campus currently have self-service, desk-side paper recycling bins. Staff and faculty are responsible for emptying their bins into centrally located paper recycling collection containers inside buildings. The paper recycling containers can be found in classrooms, conference rooms, and other public areas throughout campus buildings. Custodians consolidate paper from all of these centrally located containers into carts that they roll to a building's loading dock. Recycling & Solid Waste crew empty the carts into a compacting truck at the loading dock and then transport the material to a local recycling center.

In 2008, Recycling & Solid Waste introduced MiniMax, the desk-side, selfservice recycling and waste collection program that combines a 28-quart bin for recyclables with a detachable 3-quart hanging, unlined waste bin at each workstation. The program aims to *minimize* waste and *maximize* recycling while promoting personal responsibility for waste generation, reducing the number of plastic liner bags going to the landfill, and allowing custodians to focus on the building's critical public spaces.

While MiniMax does not specifically focus on paper, the hope is that more paper will be captured as people take responsibility for their workspace.

Recycling & Solid Waste staff install bins.



Paper collection in primary use areas.



Use of MiniMax recycling system spreads.



Program History

| • • • • • • | • • • • • • • • • • • • • • • • • | |
|-------------|--|--|
| 1970 | UW holds the "World's First Trash-In" where students bring trash from home and around campus to the HUB lawn. The trash is separated into different categories, including paper, and returned to the original producers with the request to reprocess and recycle the materials. | Paper Footprint |
| 1973 | Campus computer centers begin recycling computer tab cards and printout paper. | In fiscal year 2010 the University of Washington saved more than 24,000 |
| 1994 | The UW Solid Waste Management Office opens its Recycle Center at Union Bay Place. All paper sorting operations move to this location. | trees by recycling paper. |
| 2003 | Recycling & Solid Waste commissions a waste characterization study. Of the 8,551 total tons disposed, recyclable paper is 39% (3,274 tons) of the waste stream. | State Law Impacts UW |
| 2005 | The City of Seattle passes an ordinance banning paper from the waste stream. In response, Recycling & Solid Waste runs the <i>Stop-Think-Recycle</i> campaign to educate the campus about the ordinance. The campaign includes distribution of desk-side, self-service paper recycling collection boxes to more than 8,000 workstations on campus. | In 2009, Washington State passed a law mandating that all state agencies, including the University, purchase 100% recycled content paper for use in all offices. In addition, all agencies were required to develop and implement a paper conservation plan by July 1, 2010, with the goal of reducing paper use by 30%. |
| 2006 | To increase the amount of paper and other recyclables diverted from the waste stream, Recycling & Solid Waste begins placing mixed paper and cans & bottles recycling and garbage bin sets in classrooms and conference rooms across campus. | Recycling & Solid Waste continues to distribute MiniMax, the self-service recycling and mini waste bins, to interested departments on campus in the hopes of building awareness around waste production and diverting more paper for recycling. |
| 2007 | The Recycle Center closes in December and the sorting staff is reassigned to the Magnuson Health Sciences Building as the Green Team. The Green Team replaces full mixed paper carts in the building with empty ones and moves the full carts to the loading dock so they can be emptied. | Paper Recycling Tons 2,500 |
| 2008 | Recycling & Solid Waste transitions the campus to a new collection system whereby sorting of paper by grade is no longer required. All paper is collected in buildings as a mixed paper stream in a single style of Bagit (reusable | 2,000 2,352 2,140 2,009 2,175 |
| | polypropylene bag). Bagits are emptied by custodians into large mixed paper carts at each building's loading dock. Recycling & Solid Waste crew empty the carts and the material is transported to an off-site sorting facility. MiniMax, the desk-side. self-service recycling and waste | 1,500 1,958 2,000 |
| | collection program, is piloted at UW Tower. | 500 |
| 2009 | MiniMax becomes the standard for all new construction and renovation projects on campus and is implemented | |

on a voluntary basis in other buildings and departments.

2006

2007

2008

2009

2010

Program Highlight FOOD WASTE COMPOSTING

University of Washington



Housing & Food Services collects food waste.

New bins at the UW Medical Center's Plaza Café help customers sort recyclable/compostable waste.

Composting Grows

In 2010, a total of 965 tons of food waste were collected on campus and composted. This was a 20% increase over 2009 (803 tons).

Following the procurement of several sizes of compostable hot cup lids and a compostable lid for soft drink cups in January 2010, the Housing and Food Services line of to-go items was about 98% compostable.

To meet the city of Seattle's new requirement that all food service products designed for one-time use be replaced with one-time use products that are either compostable or recyclable, Recycling & Solid Waste worked closely with Intercollegiate Athletics and the stadium food services vendor to ensure compliance for the 2010 football season. Recycling & Solid Waste helped the vendor purchase the required compostable food service products.

Compost carts were added to the existing waste and recycling bin sets throughout the stadium concourse area to meet the other new city requirement that compostable and recyclable items be collected in clearly labeled bins. Recycling & Solid Waste designed custom bin signage that showed actual items sold at concession stands and their appropriate end-of-use waste stream: compost, garbage, or recycling. During the 2010 football season, a total of 11.6 tons of food waste were collected.

Post-consumer composting was launched at the University of Washington Medical Center's Plaza Café in late September 2010. The café is currently using a select line of compostable items and will add additional compostable items in the future. Clearly labeled containers for waste, recycling, and compost are at the tray return area. Recycling & Solid Waste designed and produced customized posters for the tray return area and table-top cards for the seating area. In the first three months of the program (October - December), more than 12 tons of food waste were collected each month, up from an average of one to two tons per month.



Use of compostable to-go items expands.



Husky Stadium works to compost waste.



Program History

2003 The University contracted with a consulting company to perform a comprehensive waste characterization study. Results showed that 28% of the material in the landfill-bound waste stream was organics. This prompted the creation of a food waste composting pilot program for 2004.

2004 Early in 2004, coffee grounds and pre-consumer vegetative food scraps from UW Club and three Housing and Food Services (HFS) kitchens were collected and composted. By the end of the year, two additional HFS kitchens were collecting food waste. The material was transported to the vendor's composting facility.

2005 Additional HFS kitchens and coffee shops joined the food waste program. Due to the increase in volume of material, service changed from on-call to a minimum of one time per week. Meat, fish, and dairy were then permitted because of the weekly service, resulting in an increase in the total amount of waste diverted. Also this year, Recycling & Solid Waste began a partnership with the Fisheries Department to compost fish carcasses.

2006 The University of Washington Medical Center (UWMC) started collecting coffee grounds for composting. Recycling & Solid Waste began assisting numerous staff groups who wanted to create their own voluntary, self-serve food waste collection programs. Also this year, a new organics contract was awarded to Cedar Grove Composting for the collection and composting of food waste, landscape debris, and clean wood.

2007 Recycling & Solid Waste worked closely with Housing and Food Services throughout 2007 on a program for collection of post-consumer food waste and compostable serviceware. By September, all HFS dining facilities were participating. The student group SEED ran pilot programs for food waste collection on several floors of two residence halls.

2008 In January, Housing and Food Services replaced all polystyrene cutlery with compostable cutlery, which further expanded their line of to-go compostable serviceware items. UWMC began pre-consumer collection of food waste in their kitchen this year and the voluntary, self-serve program for staff continued to grow.

2009 HFS and Cedar Grove Composting teamed up with Coca-Cola and International Paper to create the first compostable soft drink cup. It was introduced at HFS restaurants and cafés in January 2009.

Sorting Made Simple

••••••



Recycling & Solid Waste created all outreach materials for the new post-consumer composting programs at the University of Washington Medical Center and Husky Stadium. These materials helped café patrons and football fans more easily identify compostable materials when sorting their waste.

Food Waste Collected



UW Transportation Services

What is UW Transportation Services?

UW Transportation Services mission is to "provide innovative and sustainable transportation solutions that facilitate the educational, research, cultural and service missions of the University." It has four programs:

*Commuter Services—Biking, Walking, UPass, etc *Fleet Services—Daily Rentals, UCAR, Vehicle Licensing, etc *UW Shuttles—Dial-A-Ride and NightRide, etc *Transportation Improvement Program—Link Light Rail, etc

To learn more about UW Transportation Services, visit: http://www.washington.edu/facilities/transportation/



Creating healthier lives. It's the Washington Way.

CIPASS - It's About Cultural Change

Since 1991, the U-PASS program has been creating a culture of transit use and low impact commuting. Students and employees are immersed in a community where transit is the most common commute choice and few commuters drive alone. U-PASS is fostering the next generation of transit riders and supporters, tens of thousands of students at a time.

- Starting fall 2011, U-PASS will be a benefit experienced and paid for by all regular students at UW Seattle (approximately 40,000 students)
- 90% of U-PASS members use their U-PASS to ride Metro

"The U-PASS program allows us to educate a large audience regarding their transportation choices and hopefully influence their commute behavior with the ultimate goal of increasing sustainable commuting in our region."

-Joni Earl, Chief Executive Officer, Sound Transit

"As a result of ten years with a U-PASS, I became accustomed to taking mass transit every day. As an alumnus, I now take the bus or walk to work each day, even though I no longer have a U-PASS."

-Erin Lennon, Seattle attorney, UW Alumnus 2002, 2008, and former employee

CIPASS - It's About Climate Change

"The county will implement aggressive transit, land use and transportation demand strategies to encourage King County residents to use public transit"

– 2007 King County Climate Plan

Commuters at the University of Washington are living the climate goal and we are committed to continuing to improve our performance:

- Almost 81% of commute trips to UW Seattle are made using green transportation options
- UW Seattle commuters emit 8,180 fewer metric tons of CO₂ per year as a direct result of the U-PASS program
- The average UW Seattle commuter emits 43% less CO₂ than the typical commuter in our region



UW students **DEMONSTRATED** how much they VALUE transit by voting to make U-PASS a universal student fee





U-PASS members took **10.7 million trips** on King County Metro in 2009, accounting for 9.5% of all King County Metro trips.

U-PASS directly improves the LIVES of over 40,000 King County residents

Junior Bellevue "Most of all, I value the U-PASS for the sense of dependability and security it gives me. No matter where I go, I'll never be a few quarters short of making it home safely"

Margo Bergman

Masters Candidate West Seattle "I love the freedom of the U-PASS, the flexibility, and how it is accepted on so many forms of transportation. It's made it easy for me to consider going to school and still working."

Karin Mellskog Designer Beacon Hill

"Having a U-PASS means being able to get where I want, when I want. I really appreciate being able to combine light rail and the bus system and make unlimited transfers, if needed,"

Susan Swanzy **Clinical Technologist** Burien "U-PASS makes my long commute worry free by leaving the driving to someone else. I also value the overall benefit to the environment by one less vehicle crowding the roadways and polluting the air."



UW Housing & Food Services

What is UW Housing & Food Services?

UW Housing & Food Services (HFS) "plays an integral role in supporting the UW's mission by providing safe, convenient and affordable housing as well as programs that promote personal development."

The department also emphasizes sustainability as it builds new residence halls to LEED Certification standards and provides eco-friendly dining.

To learn more about UW HFS, visit:

https://www.hfs.washington.edu/



HOUSING & FOOD SERVICES

UNIVERSITY of WASHINGTON Division of Student Life



A LEADER IN SUSTAINABILITY

Our Commitment to Sustainability

With more than 30 cafés, restaurants and espresso bars across campus, HFS has made great strides in reaching our goal of zero waste, resulting in a significant contribution to the "greening" of the UW campus. All of our disposable containers and cutlery are compostable including the boxed lunches and other meals provided by Bay Laurel Catering.

More than 5000 students live in our residence halls and apartments on campus, and HFS provides them with a dynamic environment where they have the opportunity to actively engage in sustainable practices—from composting and recycling in campus dining locations to broader community involvement. Students Expressing Environmental Dedication (SEED), an organization created by residence hall students, manages several initiatives, from the P-Patch at the UW and compost programs to serving as peer mentors and leaders.

HFS is just one of many campus departments working in support of the UW's sustainability initiatives. We have made significant achievements in composting and recycling over the past couple of years, and that success is due in large part to the ongoing collaborations we have with our partners. It's a team approach that includes students, other UW departments, vendors, suppliers and other civic and government agencies. We are committed to a sustainable future for the UW campus, its services, students and the community.

Quick Facts

- 2010 we sent over 60% of all waste from HFS facilities to recycling or composting facilities.
- Bay Laurel Catering provides quality products and service as well as compostable food and beverage packaging. https://www.hfs.washington.edu/baylaurelcatering/
- We replaced the chemicals used for cleaning in our facilities with eco-friendly products.
- For fiscal year 2011, we sent more than 3,500 gallons of used cooking oil off-campus to be converted to clean-burning biofuels.
- We use herbs from our residence hall garden for cooking.
- Our disposable containers and cutlery are 100% compostable including the boxed lunches and other meals provided by Bay Laurel Catering.
- HFS and UW Recycling have brought composting to Red Square. We now have six compost/recycling stations next to our mobile dining units in Red Square.
- We have found a compostable product that takes the place of aluminum foil. We no longer use foil for our products, which keeps HFS 100% compostable.



• HFS partnered with Cedar Grove, International Paper and Coca-Cola to create the world's first compostable softdrink cup, coated with a plant-based resin.

"UW is a really sustainable, green campus; we set the bar when it comes to being green, right? Why don't we be green in every way we can?" Kara Tebeau, a member of Students Expressing Environmental Dedication (SEED)

Our Sustainability Experts

- HFS consulted for The National Association of College and University Food Services (NACUFS) on their NACUFS Sustainability Guide
- HFS was asked by the city of Seattle to consult with them about the launch of their compostable-packaging program.

Sustainable is Obtainable: Get Crunchin'

The chips we sell at the Hot Dawgs cart on Red Square are not your average chip. The potatoes are grown and processed into raw chip

slices near Yakima. We purchase the frozen raw chips and fry them at By George in trans fat-free cooking oil. The used oil is picked up and processed

into biodiesel. And that's not all-

once the chips are fried, we bag them in special compostable bags. So, if you're looking for homemade potato chips in a compostable bag, come on over to Hot Dawgs in Red Square.

"The most successful sustainability initiatives are those that have a positive impact on our ecosystem and can be sustained over time." Micheal Meyering, HFS

Future Plans

We are excited about our future plans and continue to incorporate sustainability into our newest goals, which include:

- Create a closed-loop system by converting our used cooking oil into biodiesel on campus through a studentoperated enterprise. The biofuels will be used to power campus vehicles and generators.
- Further offsetting our carbon footprint by reducing truck deliveries to our buildings
- Increasing landfill diversion from 60 to 65%.
- Creating a sustainability "theme community" in one of our new residence halls.

The Housing Master Plan, a ten-year plan for new and renovated residence halls and apartments on campus, will create more than 2,000 more beds for students, plus new facilities like a wellness/fitness center and an academic resource center. Sustainable features of our new buildings and the surrounding areas include:

- Over 60 new street trees and major landscaping including the addition of roof gardens and a public park
- Using natural light to provide effective internal lighting during the day
- Reduced usage of resources: at least 75% of our construction waste will be recycled
- Buildings that are certified LEED gold
- Roasting coffee beans on campus
- Offering milk in reusable glass bottles

THEN NOW

- 2008–09 academic year
- **3 million** disposable knives, forks and spoons sent**> 0** disposable knives, forks and to the landfill-2006 🍆

0% of service ware available for composting at HFS dining locations-2006

- **50%** of our food and beverage purchases were from •••••• **54%** of our food and beverage purchases local artisans, farmers and food producers 2009–10 academic year
- 500 tons of waste diverted from landfills over 750 tons of waste diverted from landfills 2010–11 academic year

spoons sent to the landfill-2010-11

100% of service ware available for composting at HFS dining locations-2010-11

are now local including Theo Chocolate from Fremont, organic juice from the Columbia Gorge, and Snoqualmie Gourmet Ice Cream from Maltby, Washington 2010–11 academic year

UW Environmental Registered Student Organizations

What is a Registered Student Organization?

UW Registered Student Organizations (RSOs) are student groups registered at the UW that serve student interests in specific topics. There are more than 700 RSOs on campus.

The RSOs in this binder are all environmentally related as they are interested in various sustainability issues on and off campus.

To learn more about UW Environmental RSOs, visit:

http://green.washington.edu/env-students



UW Farm Fact Sheet, September 2012

Current Farm Crews

- Vision Team
- **Dirty Dozen**
- **Outreach Committee**
- Bee Committee
- **Compost Crew**
- Green Team .
- Fungi Committee

Regular Farm Events

- Weekly Work Parties
- Weekly Crew Meetings
- **Biannual Honey Harvests**
- **Quarterly Pizza Bakes**
- **Quarterly Farm Field Trips**
- **Annual Fundraiser Banquet**
- Spring/Fall outreach to Carlson Center volunteers
- Weekly (on average) Farm tours

Recent Farm Numbers

- 768 people on the email listserv
- 20 volunteers on the "Dirty Dozen" Spring Quarter 2012 volunteer crew
- 13 UW class tours given Spring 2012
- 11 K-12 tours given Spring 2012
- 292 lbs donated to the U-District Food Bank Summer 2012
- 131 lbs sold in the UW Med Center Farmer's Market, Summer 2012 (1 harvest)

105 lbs sold to Housing Food Services, Summer 2012 (1 harvest)

Farm History



Selected UW Classes on the Farm:

Environmental Foundations (ENVIR 100)



THE KING AN

The Urban Farm (BIO 240)

The UW Farm

Geography of Food (GEO 261)

Anthropology of Food (ANTH 361)