

**University of Washington
Environmental Stewardship Advisory Committee**

**Annual Report
September 2006 – June 2007**

and

Biennial Review

Submitted to:

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and

Weldon Ihrig, Executive Vice President

September 2007

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EXECUTIVE SUMMARY

I. Overview

The University of Washington continues to progress in its environmental stewardship role, receiving awards in environmental excellence for waste reduction and energy conservation, joining state and national committees and partnerships. We have increased our commitment to finding harmonious solutions for promoting stewardship and sustainability principles while facing future growth and expansion. These include:

- Working internationally towards reduced global warming.
- Participating as a founding partner in the Climate Partnership with the City of Seattle (as agreed to by President Emmert in 2006/2007). This partnership is developing commitments for the regulated business community in order to reduce green house gases and improve the air quality in Puget Sound region.
- Enhancing the Environmental Stewardship web site to provide a focal point for the UW's commitment, progress, and activities directed to environmental stewardship and sustainability.
- Developing a comprehensive management system for tracking and promoting environmental stewardship and sustainability has progressed through a gap analysis and is commencing with policy review, program updates and resource assessment(s). An acronym for Environmental Stewardship and Sustainability, "ES2", has been informally adopted by ESAC as the name for the management system and the committee's work on environmental stewardship and sustainability.

Environmental Excellence

The University has significant accomplishments in promoting environmental stewardship excellence, and the following are noteworthy examples that the ESAC committee felt should be highlighted this year as demonstrations of both the UW leadership in environmental stewardship and sustainability (ES2) and the collaboration that makes progress possible.

- **UW IS A CHARTER MEMBER OF CLIMATE GROUP**
The University of Washington has become a member of the Leadership Circle of the American College & University Presidents Climate Commitment, by which the UW agrees to adopt policies that minimize global warming emissions and integrate sustainability more firmly into the curriculum, and also to provide leadership in encouraging other universities and colleges to join in the effort to address global climate change.

The commitment involves all three UW campuses. Chancellors at both UW Bothell and UW Tacoma have signed the commitment, along with UW President Mark A. Emmert.

"By signing this commitment," says Emmert, "the University of Washington agrees to develop a plan for achieving climate neutrality in terms of greenhouse gas emissions. We know that this commitment will pose some challenges. But the UW students, faculty, and staff are up to this challenge. We are already recognized as a leader in adopting sustainability practices on campus. Our faculty is recognized internationally for their work in studying climate change. It is time for us to fully embrace the responsibilities that our own research calls for."

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By becoming a signatory to the Commitment, the UW agrees to create institutional structures to guide development and implementation of the plan for achieving climate neutrality, completing an inventory of all greenhouse gas emissions, and taking short-term tangible steps toward reducing greenhouse gases through changes in construction policies, purchasing policies, travel policies, transportation plans and/or investment policies.

For more information go to:

<http://uwnews.washington.edu/ni/article.asp?articleID=31401>

- **UW MEDICAL CENTER WINS AWARD**
Hospitals for a healthy environment (H2E) awarded the University of Washington Medical Center (Seattle) an award in Environmental Leadership in 2007. The award is offered for outstanding achievements in reducing waste, eliminating mercury, and improving environmental performance. This was accomplished in collaboration with the campus Environmental Health and Safety Department (EH&S).
- **UW CAMPUS ENGINEERING, FACILITIES SERVICES WINS PAC 10 CHALLENGE**
The UW won the 2006/2007 PAC 10 challenge for best sustainable practices in utilizing green power procurement. This was a national challenge presented by the EPA to the higher ed community based on athletic conference affiliation.
- **ANNE STEINEMANN, PROFESSOR, CIVIL AND ENVIRONMENTAL ENGINEERING MOTIVATES STUDENTS**
Professor Steinemann of the Evans School taught a joint environmental and civil engineering masters' degree course in *campus sustainability indicators* during

the Spring Quarter 2007. Collaborating with campus programs, students were able to focus projects on life cycle cost analysis and cost avoidance for the University. They discovered several opportunities for cost savings that should be considered by the campus. More details are presented in the main text of this document, or for more information go to:

<http://courses.washington.edu/cee59907>

- **PROFESSOR PHILIP MALTE, MECHANICAL ENGINEERING RECEIVES ENERGY GRANT**
Professor Malte was awarded a grant to study tidal action as a potential energy source for the future.
- **HOUSING AND FOOD SERVICES SAVES ENERGY - 2007**
HFS in partnership with Seattle City Light (SCL) and SEED (Students Expressing Environmental Determination) has begun a compact fluorescent lamp (CFL) exchange program for task lighting and incandescent bulbs within HFS buildings. CFLs use 75% less energy and last 7-10 times as long as incandescent lamps. As of August, 2007 HFS has purchased over 4000 CFLs and will receive a \$3 rebate from Seattle City Light for each incandescent bulb that is replaced. The SCL rebate covers the cost of the CFL purchases. To date, the majority of CFLs have been installed in existing buildings. The program is planned to continue with new residential students this fall.
- **UW's CLIMATE IMPACTS GROUP RECEIVES THE GREEN GLOBE AWARD**
The [Climate Impacts Group](#) was named a recipient of the King County, Washington 2007 Green Globe Award on April 13, 2007. The King County Green Globe

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Awards were established at Earth Day 1997 to recognize outstanding achievement in environmental stewardship. The awards are handed out biennially by the King County Department of Natural Resources and Parks.

with the full text of the recommendations provided in Appendix C, *Recommendations aligned with the Environmental Policy Statement Goals.*

All recipients excel in leadership and activities that foster environmental stewardship by protecting the environment, managing natural resources, and benefiting the community. The CIG received the “Leader in Climate Science Award” for its work on understanding the consequences of natural climate variability and human-caused climate change for the people and resources of the Pacific Northwest. For more information go to: http://jisao.washington.edu/JISAO_admin/spotlight/globe/index.html

Implementing the ESAC Recommendations

At the request of President Emmert, Provost Wise and EVP Ihrig, ESAC members developed preliminary strategies, work plans, and timelines for the implementation of the recommendations presented in the first year of this biennium.

The UW goals articulated in the Environmental Stewardship Policy Statement serve as a direction for ESAC, therefore, the recommendations are aligned with those goals.

These recommendations are summarized in the following timeline (Table 1) indicating when major initiatives should begin, as recommended by ESAC. A synopsis of the implementation recommendations is provided in this report,

Table 1

ESAC Recommendations Aligned with The Environmental Policy Goals ¹	Implementation Timeline		
	NOW	In One Year	Continual Improvement
Goal 1 - Minimizing the Environmental Impact			
University Vehicles (3) ²			
Compact Fluorescent Lighting for Task Lighting (4)			
Overall Building Guidelines for a Policy (Energy Targeting) (5)			
Locally Harvested Foods & Materials (7)			
Green Purchasing Policy (8)			
Double - Sided Copying (9)			
Sustainability Coordinator Network (1)			
Energy Star (6)			
Natural Ventilation & Comfort (5)			
Energy Sources (4)			
Increase Building Height/Density (5)			
Goal 2- Benchmarking			
Departmental Responsibility (11)			
Metering - New Buildings (12)			
Metering - Existing Buildings (13)			
Strategic Planning for Energy Conservation (10)			
Goal 3 - Identifying Long Term Goals and Standards			
President's Climate Challenge * (2)			
Seattle Climate Partnership * (2)			
Environmental Stewardship and Sustainability System* (14)			
Goal 4 - Collaborations in Academic Engagements & Goal 5 - Communications/Outreach			
Environmental Stewardship Collaborations for Students, Faculty & Staff (15)			
Environmental Conference (16)			
Leadership Orientation Training for students, faculty & staff (17)			
President's Excellence in Environmental Stewardship Recognition Ceremony for faculty and staff (19)			
President's personal congratulations to recipients of prestigious environmental awards (20)			
Environmental Stewardship Web Site (21)			
E-Publishing (22)			
Quarterly & Annual Reports (23)			
President's Competitive Environmental Stewardship Fellowships (18)			
Goal 6 & 7 - Management Review and Reporting			
Quarterly & Annual Reports (23)			
Green House Gas Inventory * (2)			

1. These goals originate in the environmental policy statement and represent the charge to ESAC from the Provost and EVP.

2. The parenthetic numbers corresponds to the full text of the ESAC recommendations provided in Appendix C.

* Implementation for these recommendations requires work to be done now, in one year and those that require continual improvement.

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II. ESAC Operations & Objectives

During fiscal year 2006-2007, ESAC met eleven (11) times to address its charge. (The ESAC "Charge," a summary of the work completed in years 1 and 2, and the 2006/2007 schedule are provided in Appendix A, B and C, respectively. Four (4) subcommittees were formed to concentrate on these specific issues: 1) energy generation, consumption, and conservation; 2) green purchasing; 3) developing an overall building policy, and 4) promoting communications/outreach. Preliminary guidelines and strategies for the recommendations were prepared in 2006/2007. Several interested members of the University community, in addition to ESAC members worked on the subcommittees.

Objectives, Progress and Status

There were five key objectives for the ESAC committee this year:

1. Continue to discover more about campus activities directed toward environmental stewardship and sustainability.
2. Promote collaborative efforts and visibility of the UW Campuses.
3. Continue to build the framework for the ES2 system.
4. Develop implementation strategies for target areas /recommendations identified in 2005-2006.
5. Identify areas of policy development or change.

The key activities and related accomplishments for these objectives are detailed as follows.

1. DISCOVERY

ESAC heard from some of the campus programs detailing well established and ongoing activities that support the UW's environmental stewardship commitment. The ESAC objective is to assist these programs progress as the UW Campuses grow and change by: 1) supporting the programs; 2) promoting the programs; and/or 3) focusing on a needed policy change. These presentations included but were not limited to:

Green Cleaning by Facilities Services (FS), Custodial Division

The director of the FS Custodial Division provided the committee with a presentation on the custodial services' efforts to clean green, using less product and more elbow grease, as well as using less water, and streamlining the number and types of products used at the UW. The presentation identified FS hurdles such as: 1) getting the word out campus-wide about their approach to Green Cleaning; and 2) monitoring the benefits of this initiative. ESAC can assist the FS Custodial Division in promoting their green cleaning system. The presentation can be found at:

<http://www.washington.edu/admin/facserv/custodial/index.php>

Green Fleet Initiative by Motor Pool

The manager of Motor Pool for the Seattle Campus presented an update to ESAC on the Green Fleet Initiative. He mentioned that the two barriers to moving further down the ES2 path are: 1) controlling the purchase of vehicles that are not from his department, and 2) that there are two (2) policies that direct the purchases of vehicles for the UW. The green fleet now includes Flex Car, U-Car, and UPASS.

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For more information about UW Transportation Services at the Seattle Campus go to:
<http://www.washington.edu/admin/facserv/transportation/index.php>

"Nationwide Sustainability Indicators" by Environmental Health & Safety (EH&S)

The EH&S supervisor of the UW pollution prevention program presented the various sustainability indicators available to colleges and universities including the Campus Consortium of Environmental Excellence (C2E2) in which EH&S has participated, and the Association Advancement for Sustainability in Higher Education (AASHE) sustainability indicators.

2. COLLABORATION

There are several internal and external (to the University) opportunities for collaboration in moving forward with stewardship and sustainability goals. These collaborative efforts help ESAC explore what the University can do towards environmental stewardship.

Collaborating with external partners

"Washington State Energy Policy" by Matt Steuerwalt, Energy Policy Staff, Governor's Office

Matt Steuerwalt of the Governor's Energy Policy Staff joined ESAC for a conversation on what can be expected from Washington State legislature in the next few years on its energy policy. For more information on Governor Gregoire's (and Washington State) energy management issues go to:

<http://www.governor.wa.gov/priorities/energy/default.asp>

"Sustainable Seattle" by Chantal Stevens, Executive Director

A detailed presentation was provided to the ESAC members on the social aspects of sustainability and the application of

sustainability indicators. For more information about Sustainable Seattle go to:
<http://www.sustainableseattle.org/>

Collaborating with faculty and students

"The Carbon Cycle" by Richard Gammon, Professor, Oceanography and Chemistry

Professor Gammon provided ESAC with an overview of the carbon cycle, to give members a better understanding of global warming and the challenges of Climate Change.

"Climate Friendly Investing: Recommendations for the Path Forward" by Katie Bombico, Paul Fleming, and Will Lana, UW Students

Students discussed the feasibility of the University investing in climate friendly ways. They discovered that there are several opportunities for the University to consider environmentally sustainable investing, as well as donor interests in this type of investments.

"UW Climate Partnership , The Next Best Steps" by Eli Levitt, Matt Kuharic, Amy Wheelless, UW Students

The students discussed some strategies available for managing climate change, including the implications of purchasing carbon offsets.

Environmental Stewardship Integration into the UW Curriculum

Professor Steinemann of the Evans School, taught a joint environmental and civil engineering masters' degree course on *campus sustainability indicators* in the Spring Quarter 2007. Students (in this course) conducted a special session for ESAC members. ESAC recommends that these potential savings (that are highlighted below) be forwarded to the appropriate administrative department that can evaluate the project results and, if feasible, implement the recommendations. The topics presented included:

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"Environmentally Responsible Purchasing at the UW " by Craig Benjamin and Sarah Reyneveld

Students identified a sustainability opportunity at the University of Washington. This opportunity is an Electronic Product Environmental Assessment Tool (EPEAT) was developed over an intensive process involving over 100 stakeholders from the computer industry (including the City of Seattle and the UW's 3 main computer suppliers, Dell, HP and Apple); EPEAT provides an easy to use purchasing tool to help organizations compare computers based on their environmental attributes.

If EPEAT is implemented, the University could become a leader in environmentally responsible computer purchasing practices. Based on current projections, this project would produce **quantifiable benefits over \$600,000 per year for the UW**. The students believe that by using these guidelines, the UW can take greater advantage of its purchasing power to leverage change in the computer industry, and to **place the UW as a leader in environmentally responsible purchasing**.

"The Green Campus: Significant Tree Designation at the UW" by Deborah Brown
Students studied reconciling tree preservation with campus construction through a "significant tree designation" program. This program provides a list of criteria with which to designate significant trees and a template for integrating the significant tree program with the current construction planning and design process. A **\$630,000 per year savings can be realized**, extrapolating from a UC Davis study measuring annual environmental and social benefits of trees (Maco, 2004).

"Greening Campus Data Centers" by Seung-Jin Lee and Brendan O'Donnell
Students explored highly energy-efficient designs for the new biology building's data center.

Benefits and Cost Savings to UW

Data centers are notorious for their high electricity consumption. Rising power densities and electricity prices fuel the need to implement energy-efficient designs in UW's data centers. The UW will need an estimated 2.5 to 3.0 megawatts (MW) of computing power in the coming decade. With the recent acquisition of the UW Tower Properties, three quarters of that power need can be met through the implementation of a new primary data center.

This project can provide an order of magnitude cost savings based on a 0.4 MW server room facility. Assuming non-stop annual operation, a conservative energy savings of 10% is approximately equal to 350 MWh of electricity. With current energy prices of \$0.07/kWh, **a yearly savings of about \$24,000 is possible**. This is roughly equal to a graduate student's salary.

For more details on these cost savings projects go to:
<http://courses.washington.edu/cee59907>

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3. IMPLEMENTATION STRATEGIES

The four (4) ESAC subcommittees focused on developing work-plans and timelines, which were then presented to the committee as a whole for final adoption. The committees and chairs are as follows:

Energy, Chaired by John Chapman, Director, Campus Engineering, Facilities Services.

Green Purchasing, Chaired by Anthony Guerrero, Director, Facilities Services, Bothell.

Guidelines for developing an Overall Building Policy, Chaired by John Schaufelberger, Associate Professor, Construction Management

Communications/Outreach, Chaired by Douglas Wadden, Professor, Design, School of Art.

Over the past year, several notable activities have been undertaken as a result of collaboration among ESAC members and multiple campus partners that point to progress in achieving environmental stewardship. For example:

Energy Subcommittee

The initial **green house gas inventory** for the University is complete. Work will continue on the inventory to meet the commitments of the Seattle Climate Partnership.

Housing and Food Services (HFS) Housing and Food Services Saves Energy with Compact Florescent Lamp Exchange

HFS in partnership with Seattle City Light (SCL) and SEED (Students Expressing Environmental Determination) has begun a compact fluorescent

lamp (CFL) exchange program for task lighting and incandescent bulbs within HFS buildings. CFLs use 75% less energy and last 7-10 times as long as incandescent lamps. As of August, 2007 HFS has purchased over 4000 CFLs and will receive a \$3 rebate from Seattle City Light for each incandescent bulb that is replaced. The SCL rebate covers the cost of the CFL purchases. To date, the majority of CFLs have been installed in existing buildings. The program is planned to continue with new residential students this fall.

CFLs contain a small amount of mercury, so their future disposal/recycling require special consideration. Environmental Health and Safety (EH&S) has extended the UW fluorescent lamp recycling program to include CFLs and will pick up broken or inoperative CFLs at HFS Resident Hall front desks. The front desk also serves as the point of incandescent/CFL exchange for resident hall students. EH&S also assisted in creating on one page “CFL owner’s manual” to educate students and staff regarding CFL use and recycling. SEED has assisted in communicating the CFL exchange program with peer students and hosted two “CFL exchange parties” during spring quarter 2007.

In addition to the operational savings and reduction of greenhouse gases and global warming, involving individual students in the resident halls was seen as an opportunity for students to take a first small step toward sustainability that will hopefully grow. The benefits and results of this pilot program will be documented for potential campus-wide implementation.

Green Purchasing Subcommittee

Publications Services is developing vendor relationships (throughout 2007) that will allow the UW to green its printing services. For example, the copy centers plan to go green, using 100% recycled paper.

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Communications/Outreach Subcommittee

Harborview Medical Center has started an environmental stewardship and sustainability committee to build upon current achievements at the University and to practice environmental stewardship as it grows and changes.

Publication Services is also assisting the ESAC communications/outreach subcommittee in creating an environmental stewardship web site in collaboration with students and faculty. The web site will be maintained by Publication Services for one year, with the goal of providing a central location for information on the rapidly progressing environmental efforts at the University.

In addition to the actions previously discussed, ESAC continued working on the recommendations to provide more insight into implementation strategies with a timeline and action steps that are detailed in the following Section III: "Implementation Guidelines for the ESAC Recommendations."

4. THE FRAMEWORK

The ability to manage and track success is dependent on the clarification of and closing significant gaps in environmental stewardship, setting goals and measuring progress. Much of the ESAC committee work is directed toward this effort, and the recommendations that have come forward from the ESAC efforts identify the gaps that have been discovered. As implementation strategies continue to be developed, progress will be measured, and, over the long-term, a comprehensive management system will evolve. For this period, the recommendations of the committee

have been aligned with the goals in our charge, so that the first performance measure (progress toward meeting the charge and its goals) can be accomplished. Based on these recommendations, the subcommittees developed guidelines for implementation strategies, along with a timeline for actions the University can take: 1) now; 2) in one year; and 3) with continual improvement.

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III. IMPLEMENTATION GUIDELINES FOR ESAC RECOMMENDATIONS

ACTION: UW PRESIDENTIAL LEADERSHIP IN ENVIRONMENTAL STEWARDSHIP

NOW

- Establish the University's leadership position in environmental stewardship by providing the staffing and fiscal support needed to propel environmental stewardship to the next level and to sponsor a national conference on University Environmental Stewardship for other national university and college administrators.
- Support the ESAC Chair in further collaboration of students, faculty and staff through her presentations to the Board of Deans, Faculty Senate and the Council of Environmental Deans to enhance problem-solving on environmental issues by providing the supportive resources for students to engage in environmental stewardship projects through sponsoring programs such as the Program on the Environment, and voluntary actions such as Professor Steinemann's sustainability indicator course.
- Support the members of ESAC in their efforts to make departments aware of their own role in environmental stewardship and sustainable practices and energy use. Publicize departmental sustainable activities and energy use with caveats regarding different situations (e.g., building type, departmental mission, etc.).

- Support the broadening of the University's commitment to the principles of environmental stewardship by incorporating the University's stewardship commitment into all new student/employee orientations and in University leadership training.
- Recognize accomplishments by establishing an annual President's award for "Excellence in Environmental Stewardship" to be given as part of the annual recognition ceremony for faculty and staff, when deemed appropriate.
- Recognize outstanding operational units by extending personal congratulations to recipients of prestigious environmental awards.

IN ONE YEAR

- Further scholarship in the environmental stewardship arena by: 1) establishing a competitive Presidential Environmental Stewardship Fellowship(s) and 2) encouraging development of undergraduate and graduate coursework and research projects on campus environmental stewardship.
- Support the creation of a stipend program for students and provide supportive resources for a Sustainability Coordinator Network communications/outreach program.

CONTINUAL IMPROVEMENT

- Issue a notice to all colleges and units that the inclusion of environmental stewardship and sustainability initiatives and energy conservation is a required planning element of the annual strategic planning process of each college and unit.

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ACTION: SEATTLE CLIMATE PARTNERSHIP

Now

- Implement the requirements of the President's Climate Initiative to create a *team* to move this initiative forward. Establish the process to ensure that the UW commitments to its varied climate change goals are met.

IN ONE YEAR

- The green house gas (GHG) inventory was completed in 2006 and submitted to EVP Ihrig for review and implementation. ESAC will continue to support the GHG inventory progress in order to ensure that the President's Climate Initiatives are successful.

CONTINUAL IMPROVEMENT

- The strategy established will change as the UW grows and expands to include new campuses. Climate Initiatives need to be included in the master plan along with other environmental stewardship and sustainability benchmarking strategies.

ACTION : BUILDING GUIDANCE DOCUMENT AND POLICY

Now

- **OVERALL BUILDING POLICY**
ESAC coordinated an advisory team to address green (sustainable) buildings practices at the UW. The advisory team will prepare building guidelines this year for use by the administrative units involved in building decisions at the UW. The guidelines will include, but not be limited to:

- **NEW BUILDINGS - ENERGY TARGETING OF CAPITAL PROJECTS OFFICE (CPO) PROJECTS**

ESAC recommends that life cycle cost analysis be integrated into the Capital Projects Office procedures in order to make more informed decisions with administrative units. This will provide an awareness of the significant impact that can be made by establishing progressive energy targets for major construction projects with *significant cost savings and that support the President's UW Climate Initiative.*

- **LOW FLOW FUME HOOD**
A member of ESAC, who also serves on the UW Ventilation Safety Committee, is assisting in developing a guide for installation of low flow fume hoods which can reduce related energy by up to 50%.
- **BICYCLE/PEDESTRIAN INFRASTRUCTURE**
ESAC is working with the UW transportation director to develop a budget, and design for an enhanced bicycle/pedestrian infrastructure (and related facilities such as showers) for the Seattle Campus.

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Action: Building Guidance Document and Policy, continued...

IN ONE YEAR

- **COMFORT**
ESAC is working with Facilities Services to identify an "expanded range" comfort guidelines along the lines of American Society of Heating, Refrigerating and Air-Conditioning Engineers Standards for human comfort (ASHRAE) 55 for energy reduction.

- **NATURAL VENTILATION**
The use of natural ventilation is a cultural change that requires an education and outreach program. Existing buildings will require upgrades to provide adequate natural ventilation, and new buildings must be designed to function properly. Issues of concern that require more study include 1) street noise, 2) indoor air quality, and 3) health and safety issues.

CONTINUAL IMPROVEMENT

- **INCREASED HEIGHT OF BUILDINGS/DENSITY**
ESAC recommends that zoning and/or building codes be monitored by Capital Projects and Environmental Health and Safety Departments for changes to building height/density and that can be incorporated into the UW Master plan as appropriate.

ACTION : METERING

NOW

- **METERING - NEW BUILDINGS**
Establish a policy that requires metering in all new building designs and major renovations planned by the UW, and ensure that metering requirements are included in the Facilities Design Information (FDI) guidance document.

IN ONE YEAR

- **METERING - EXISTING BUILDINGS**
Funding is needed to ensure that a software program is created to monitor the information gathered from implementing metering (in new and existing buildings) into useful data, and a tool to identify and correct problem.

ACTION : GREEN PURCHASING

NOW

- **DOUBLE-SIDED COPIES**
An education and outreach program can be implemented to move this action forward. ESAC is working with purchasing to develop a product purchasing guide for copiers and printers with 2-sided capability.

- **GREEN PURCHASING POLICY**
Support purchasing in the development, preparation and implementation of a green purchasing policy. The policy can produce cost savings from reducing energy consumption, reducing paper purchases, and reducing the amount of generated wastes.

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- **LOCALLY HARVESTED FOODS AND MATERIALS**
Housing and Food Services has established internal processes to procure healthy, organic and locally harvested foods and materials to the greatest extent possible. HFS will share this information with interested departments.

IN ONE YEAR

- **ENERGYSTAR**
ESAC recommends that an executive order be issued to purchase energy efficient equipment and machinery whenever possible. In coordination with Purchasing, ESAC supports an education/outreach effort to ensure that buyers know their options for energy efficient equipment and machinery, and the long term savings advantages for the University.

ACTION : ENERGY

NOW

- **COMPACT FLUORESCENT LIGHTING**
Support the implementation of a practice of using energy efficient lighting in all campus applications. While the majority of the indoor building lighting has been converted to energy efficient fluorescent lighting, there are still opportunities for reducing energy consumption by other types of lighting fixtures. The focus of the program will be on task lighting and fixed incandescent lighting in buildings.
- **UNIVERSITY VEHICLES**
Support a comprehensive review of the UW vehicle purchasing policy. Support the purchase of the most energy efficient vehicles

possible including but not limited to alternative fuel vehicles that will meet the needs of the majority of UW users. ESAC supports the U-Car project as a methodology to reduce the overall fleet size. Consider a reduction in the fleet that is not alternative fueled vehicles.

CONTINUAL IMPROVEMENT

- **ENERGY SOURCES**
The benefit of using energy sources that cause the least amount of harm to the environment has a high cost benefit and supports the UW President's Climate Initiative. Continue using renewable energy and seeking other sources of renewable energy. Educate the UW community on alternative and feasible energy sources.

ACTION: COMMUNICATION/OUTREACH PLANS

NOW

- **E-PUBLISHING AWARENESS PROGRAM**
ESAC recommends that a communications/outreach program be created and circulated by Publication Services to ensure that the UW population is aware of the-opt out program for hard copy publications.
- **ENVIRONMENTAL STEWARDSHIP WEB SITE**
ESAC is collaborating with students, faculty and staff to create an enhanced University wide environmental stewardship web site that is projected to be published in 2007. Funding is needed for ongoing and continual maintenance and support of this web site.

IV. Future ESAC Key Objectives for 2007/2008

The ESAC committee is anticipating the following major initiatives as part of its strategic activities for the first fiscal year of the next biennium.

1. DISCOVERY

ESAC will gather additional information to advise the Provost and EVP on the following topics:

- Establishing a process of including environmental stewardship and sustainability (such as energy and water conservation and consumption reduction) in all strategic plans for UW departments.
- Requesting the standardization of the installation of metering on all new buildings.
- Providing an article for UWeek about purchasing efforts to support carbon neutral efforts by reducing the number of trips to the UW by Office Depot.
- Requesting the support of Financial Management for the purchasing efforts in reducing trips to campus by vendors in the effort to obtain carbon neutral.
- Endorsing an Electronic Product Environmental Assessment Tool (EPEAT) purchasing policy for green computers will be undertaken.

2. COLLABORATION

Collaboration will be encouraged by:

- Presenting the UW environmental stewardship annual report highlighting the University's accomplishments to the Board of Deans.
- Working with students to create a student project on developing a software program to make data gathered by metering a useful tool for the University strategic planning and management.
- Meeting with administrative units to discuss the process of exporting their environmental stewardship achievements and goals to other administrative units. This will encourage other departments to achieve similar objectives.

Two examples of these achievements include:

- HFS use of healthy, organic, and locally harvested foods, and
- Facilities Services and HFS installation of CFLs for task lighting.

3. IMPLEMENTATION STRATEGIES

The President's Climate Change Commitment

The ESAC Energy subcommittee will continue to participate on the Green House Gas Inventory Team in an advisory capacity to support the Seattle Climate Partnership signed by President Emmert (summer of 2007). It will also prepare a matrix of the climate change initiatives and prepare a plan for the Provost and EVP on how to meet the criteria of the climate challenges.

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Recommendations shall at a minimum include: 1) the program, 2) funding, 3) where to house the effort; and 4) who should lead the effort.

4. FRAMEWORK - MONITORING

ESAC will continue to monitor the progress of the administrative units implementing environmental stewardship in their departments by receiving:

- An update on the status of the university vehicles and the related policy.
- A review of regulatory compliance efforts on the campus regarding environmental stewardship.
- Reports and/or presentations from the various environmental committees on campus to continue the compilation of environmental actions and programs currently in place at the University.
- Presentations and/or information regarding several environmental stewardship/management areas such as air, climate change, waste management, energy conservation, and water resource conservation.

Appendices

The ESAC Charge *

The University of Washington has established a commitment to environmental stewardship, setting the bar well above merely complying with laws and standards. The university is committed to being a positive force for enhancement of the environment, not just in research but in how it manages facilities and resources.

.....To measure University progress towards each of these expectations, the Provost and the Executive Vice President (EVP) have established the University of Washington Environmental Stewardship Advisory Committee. This Committee will draw its membership from the faculty, staff, and students of the three campuses and be selected to provide the necessary operational and intellectual breadth so the Committee can:

- Advise the Provost and EVP on the progress towards each of the expectation areas noted above.
- Develop, in collaboration with appropriate university units, benchmark measures of efficiency, cost-effectiveness, and the impact of activities in these areas.
- Identify long-term goals and standards by which the UW community can examine its effectiveness and short-term progress towards agreed-upon goals as well as timelines for evaluation of progress.
- Identify emerging opportunities for collaboration between academic programs and operational interests.
- Identify mechanisms by which the UW community, through collaborative efforts across academic and service units, can be made aware of the progress being made throughout the institution.
- Interact with and receive information from existing environmental stewardship committees/activities throughout the University, including the University SEPA committee, the Montlake Landfill Oversight Committee, the Solid Waste Advisory Committee, and relevant academic units.
- Report annually to the Provost and EVP as well as to the University community on activities and accomplishments.

* From the UW Environmental Stewardship Policy Statement.

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Appendix B

Summary of ESAC Work: [Years 1 and 2]

ESAC reviewed several topics to support the creation of the recommendations identified in the 2006 annual report. ESAC formed two subcommittees to focus on two of the numerous issues that affect ES2: 1) waste recycling; and, 2) energy generation, consumption and conservation.

To highlight the accomplishments of the University and share the goals and challenges of environmental stewardship and sustainability, a website was developed in 2006/2007.

The web site address is www.washington.edu/about/environmental-stewardship.

The first phase of developing an environmental management system that coordinates specific environmental management goals, policies, operations and continual improvement the University began in 2005 and is continuing in 2006/7. ESAC is the foundation of the effort, and it is attracting eager, talented volunteers from staff, faculty and students who are already committed to being effective and efficient with resources. To more appropriately represent the culture of the UW, an acronym for the management system that is more representative of the spirit of the University has evolved. The system name is “environmental stewardship and sustainability system” or “the ES2 system” for short.

DISCOVERY

Informational presentations by UW students, faculty and staff provided ESAC with a solid background in the facts and figures of the environmental stewardship and sustainability progression at the University. This information (summarized below) provided the committee with the ability to make sound recommendations to enrich and enhance ES2 at the UW. The following topics were reviewed.

- ◆ Energy Efficient Leadership in Energy and Environmental Design (LEED) Buildings
- ◆ Biodiesel Fuel Usage
- ◆ Energy Consumption, Monitoring, and Measurement
- ◆ Waste Recycling and Reduction Efforts
- ◆ Current Sustainable Practices at Bothell
- ◆ Current Sustainable Practices at Publications Services
- ◆ Current Sustainable Practices at the UW Medical Center

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ESAC RECOMMENDATIONS ALIGNED WITH THE ENVIRONMENTAL STEWARDSHIP POLICY STATEMENT GOALS

GOAL 1: Advise the Provost and EVP on the progress towards each of these expectations: 1) compliance with conformance standards; 2) minimization of negative impacts on the environment and the promotion of sound environmental practices; 3) operational reduction of resource consumption to the maximum degree feasible; 4) the promotion of environmental stewardship and sustainability opportunities in land use, development, and construction practices; and 5) incorporating environmental concerns as a significant priority in the University decision making processes.

1. **SUSTAINABILITY COORDINATOR NETWORK.** ESAC identifies this as an important tool that will enable the promotion of stewardship principles throughout all organizational units. This will involve Human Resources (HR), and a recommendation by the ESAC Chair, Dean Archibald, to Mindy Kornberg to launch a discussion about creating a sustainability network.
2. **CLIMATE CHALLENGE INITIATIVE.** The President has met the challenge, and ESAC recommends establishing a Climate Action Team who is provided with the necessary resources for developing a plan to achieve the President's Climate Initiative. This team can also support the work of the Seattle Climate Partnership. *(Note: This recommendation also aligns with Goals 3, 4 and 5 below).*
3. **UNIVERSITY VEHICLES.** The new transportation services director, Josh Kavanagh, will be invited to evaluate the current issues surrounding flex vehicles, current status and progress in using alternative vehicles, and hurdles to overcome.
4. **ENERGY SOURCES.** The ESAC Energy Subcommittee Chair will continue to lead the efforts in identifying opportunities to reduce energy consumption, find alternative energy to improve efficiencies and decrease pollution.
5. **OVERALL BUILDING POLICY.** The ESAC Building subcommittee that includes students, faculty and staff is developing guidelines for a potential "building policy." The draft policy will include but not be limited to the following areas: a) temperature comfort; b) energy targets for new buildings; c) natural ventilation; d) low flow fume hoods; e) bicycle/pedestrian infrastructure ; and f) other guideline components. **Each area will include a guideline for:** i) Actions to implement the recommendation ii) Environmental Consequences - the environmental aspect and environmental impact of the recommendation. iii) Estimated costs - initial and life cycle costs associated with the recommendation.

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6. **ENERGYSTAR.** HFS and UW Purchasing are collaborating on a green purchasing policy to address ProCard purchases, educating consumers on green products, and creating a green culture of choice.
7. **ALL BUILDINGS, LOCALLY HARVESTED.** HFS is the team lead in exporting Housing and Food Services successes in purchasing locally harvested foods and building materials to other departments. Recognizing that there may be constraints, communication is the key to getting the word out on how to make locally harvested goals a reality across the University
8. **PURCHASING COLLABORATIONS.** The UW Purchasing department is taking the lead role in developing a green purchasing policy with the following action steps to conserve energy: 1) vendors are delivering to campus only two days per week, in lieu of every day trips. Purchasing is educating consumers on just-in-time inventory, and the cost savings and energy conservation benefits of planning purchases around a 2-day delivery schedule. Purchasing will collect data and inform ESAC of the trip reduction and cost savings.
9. **DOUBLE-SIDED DEFAULT SETTING ON COPIERS AND PRINTERS.** The ESAC Green Purchasing Subcommittee Chair is collaborating with Purchasing to provide information to the UW population on equipment with double-sided capabilities. A communication campaign is underway.

GOAL 2: Develop benchmarking measures of efficiency, cost-effectiveness and the impact of activities in these areas.

10. **STRATEGIC PLANNING.** Including environmental stewardship/sustainability initiatives in collegiate and unit strategic plans is recommended as one important strategy for organizational unit “ownership” for ES2.
11. **DEPARTMENTAL RESPONSIBILITY.** Recognizing that each unit is different with varying demands for energy use, ESAC recommends that publicizing departmental activities and energy use will encourage other to consider alternative options for reducing energy consumption.
12. **METERING - NEW BUILDINGS.** A policy will be required to handle the installation of energy metering for all utilities and appropriate sub-metering for all new buildings, and retrofit existing buildings with metering, where feasible.
13. **METERING - EXISTING BUILDINGS.** Programs are underway for this metering effort, and Facilities Services is now working on finding software that will make the data useful. This is a priority for next year's subcommittee work.

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GOAL 3: Identify long term goals and standards by which the University community can examine its effectiveness and short-term progress towards agreed upon goals as well as timelines for evaluation of progress.

14. **ES2 System.** Work on the ES2 system is progressing through the policy review and gap analysis stages. ESAC plans to continue working in this area in 2007/2008.

GOAL 4 AND GOAL 5:

Identify emerging opportunities for collaboration between academic programs and operational interests.

Identify mechanisms by which the University community, through collaborative efforts across academic and service units, can be made aware of the progress being made throughout the institution.

15. **INCREASE AND IMPROVE THE COLLABORATION OF STUDENTS, FACULTY AND STAFF.** The ESAC Chair (Dean Archibald) will talk with the Environmental Board of Deans during the Summer 2007 charette about options for further collaboration. In addition, efforts will continue with faculty members who have expressed interest in student research efforts that will support ESAC efforts.
16. **ESAC RESOURCES FOR CONFERENCES, AND FUNDS FOR STUDENT, FACULTY AND STAFF COLLABORATIVE PROJECTS.** The ESAC Chair (Dean Archibald) contacted the Program on the Environment Director (Julia Parrish) to discuss collaboration.
17. **ENVIRONMENTAL STEWARDSHIP PRINCIPLES INCORPORATED INTO THE UNIVERSITY LEADERSHIP TRAINING.** Incorporating the University's stewardship commitment into all new student/employee orientations and in University leadership training is recommended by the committee and will be explored further.
18. **PRESIDENTIAL ENVIRONMENTAL STEWARDSHIP FELLOWSHIP(S).** The ESAC Chair communicated to President Emmert recommending that the President establish two (2) funds: 1) for fellowships for undergraduate and graduate students working in the environmental stewardship arena with faculty advisory, and 2) to establish stipends for students who are willing to be sustainability coordinators in their residences, or in an assigned campus building.
19. **EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP AWARD.** University accomplishments should be recognized by establishing an annual "Excellence in Environmental Stewardship Award" to be given as part of the annual recognition ceremony for faculty and staff, when deemed appropriate.

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20. **EMPLOYEE EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP RECOGNITION.**

It is recommended that outstanding operational units be recognized by extending the President and/or Provost sending personal congratulations to recipients of prestigious environmental awards. For example, in 2006:

- The UW Motor Pool received a 5-star rating, and Eco-Star Award;
- The UW Medical Center received the Governors' Pollution Prevention Award

21. **THE UW ENVIRONMENTAL STEWARDSHIP WEBSITE.** To: 1) highlight the accomplishments of the University; 2) share the goals of environmental stewardship and sustainability; and 3) serve as a central focus for students, faculty, and staff interested in environmental stewardship, an enhanced website is under development by a student, faculty and staff collaboration. As part of this effort a student project is underway under the guidance of the ESAC Communications/Outreach Subcommittee Chair to develop an "identity" around UW environmental stewardship.

22. **E-PUBLISHING OPT-OUT OPTION.** This same Subcommittee Chair is also leading an effort to discover how to proceed in promoting e-publishing through a UW commitment to minimize print copies of UW publications.

GOAL 6: Interact with and receive information from existing environmental stewardship committee/activities throughout the University, including the University SEPA committee, the Montlake Landfill Oversight Committee, the Solid Waste Advisory Committee, and relevant academic units.

Updates on these committee activities are scheduled for the 2007/2008 meeting season.

GOAL 7: Report Annually to the Provost and EVP as well as to the University community on activities and accomplishments.

23. **QUARTERLY STATUS REPORTS.** In addition to this annual report, the Committee felt it important to give more frequent feedback on the University's progress. Through the committee chair, ESAC will be providing the Provost and EVP with frequent in person briefings and/or quarterly status reports informing them of the rapid changes and progress at the University towards environmental stewardship goals, emphasizing the University's leadership, visibility and dollar savings through these efforts.

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Appendix D

ESAC Meeting Schedule 2006 – 2007

Month	Day	Year
September	07	2006
October	09	2006
November	16	2006
December	27 *	2006
January **	04	2007
February **	28	2007
March **	28	2007
April	26	2007
May	24	2007
June	21	2007

* The December 2007 meeting was not held due to the holiday season.