## University of Washington Environmental Stewardship Advisory Committee

Annual Report September 2005 – June 2006

## Submitted to:

Phyllis Wise, Provost

## And

Weldon Ihrig, Executive Vice President

November 30, 2006

#### Environmental Stewardship Advisory Committee – Member List - 2005/2006

**Sandra O. Archibald, Chair** Dean Daniel J. Evans School of Public Affairs

**John E. Banks** Assistant Professor of Biology Interdisciplinary Arts and Sciences, UW Tacoma

John C. Chapman (for Jerry McCray) Acting, Associate Vice President Facilities Services

**Richard A. Fenske** Professor Environmental and Occupational Health Sciences

**J. R. Fulton** Project Manager Capital Projects Office

**Anthony Guerrero** Director Facilities Services and Physical Plant, UW Bothell

**Robert F. Halvorsen** Professor Economics

**H. Asuman Kiyak** Professor Oral and Maxillofacial Surgery

**Philip C. Malte** Professor Mechanical Engineering John E. Schaufelberger Associate Professor Construction Management

**Gretchen Snoey** GPSS Representative, Student International Studies/Public Affairs Daniel J. Evans School of Public Affairs

Chris Stafford ASUW Representative, Student Geography/PoE

**Corwin Hockema** ASUW Representative, Student

**Stephanie K. Steppe** Director Health Sciences Academic Services and Facilities

**Karen A. VanDusen** Director Environmental Health and Safety

**Bethany Van Etten** Student Political Science, Senior

**AJ Van Wallendael** Coordinator Environmental Stewardship Advisory Committee

**Douglas J. Wadden** Professor Design, School of Art

ANNUAL REPORT

## Contents

EXECUTIVE SUMMARY	ES-1
ESAC OPERATIONS	1
THE FIRST YEAR IN REVIEW	1
THE SECOND YEAR OBJECTIVES, PROGRESS AND STATUS	2
ESAC IN ACTION	7
RECOMMENDATIONS	8
FUTURE ESAC ACTIONS	10

## **ATTACHMENTS**

- A. THE ESAC CHARGE (EXTRACTED FROM THE ENVIRONMENTAL STEWARDSHIP POLICY STATEMENT)
- B. ESAC MEETING SCHEDULE 2005- 2006 ACADEMIC YEAR
- C. ESAC Costs

ANNUAL REPORT

## **Executive Summary**

## The University of Washington is

**proactive** in environmental stewardship and sustainability,. There is so much activity that it is difficult to: measure the effectiveness of the activity and to determine if there is a common underlying theme or desired outcome for the University. It is possible that competing priorities that waste resources exist. It is beneficial for the University to collaborate on environmental stewardship and sustainability efforts wherever and whenever possible. This discovery (in the first year) led ESAC to gather further information and prepare for the second year of environmental stewardship work.

To increase the visibility of the University's commitment to environmental stewardship and emphasize the high value the University places on environmental stewardship and sustainability, the ESAC members continued to work in the areas of: 1) communications and outreach, 2)operations tracking and 3)discovery of current sustainable programs underway at the UW.

A website was developed in 2005/2006. The web site address is: www.washington.edu/about/ environmentalstewardship.

The first phase of developing an environmental management system for the University is underway. ESAC is currently providing the foundation of this effort, and it is attracting eager, talented volunteers from staff, faculty and students. The system's title has been established as the "environmental stewardship and sustainability (ES2) system" to adequately represent the scope of the environmental management system.

## **Environmental Excellence**

ESAC recognizes the following accomplishments by UW students, faculty and staff as a demonstration of the UW leadership in environmental stewardship and sustainability (ES2).

## LEED Buildings Project Summary

Project	GSF	Year Completed / Forecast	Current Status
Nordheim Court	175,000	2003	Certified
Tacoma Phase 2B	133,000	2004	Certified Silver
Merrill Hall/CUH	19,670	2004	Certified Silver
Research & Technology	123,000	2006	Project registered
Guggenheim Hall	57,054	2007	Project registered
Architecture Hall	48,715	2007	Project registered
Cobb Building (UW REO)	130,000	2006	Project registered
Educational Outreach	68,076	2007	Project registered
Johnson Hall	120,000	2006	Project registered
Savery Hall	103,105	2009	Project registered
Clark Hall	30,541	2009	Project registered
Playhouse Theater	10,147	2009	Project registered
UWT Asembly Hall	70,250	2009	Project registered

#### ANNUAL REPORT

- Through the dedicated efforts of Capital project Staff (who volunteered their time and expertise to offer classes and training on Leadership in Energy and Environmental Design (LEED) Standard during their lunch hour), there are over 60 LEED Accredited Professionals at the UW, and this number continues to grow.
- The UW solid waste recycling staff achieved a reduction of over \$400,000 in solid waste disposal costs by implementing an expanded campaign on recycling.
- UW Facilities Services reduced utilities costs by over \$1,000,000 in 2003 - 2004, and continues that trend in 2005/2006 through education of residents, and programs like "turn out the lights".
- Discovery

#### ESAC reviewed and discussed several

**topics of priority** identified by the Provost and EVP charge to the committee through presentations from external experts and UW student, faculty and staff experts. These topics and findings included but are not limited to:

- LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
- BIODIESEL
- ENERGY CONSUMPTION MONITORING AND MEASUREMENT
- WASTE RECYCLING EFFORTS AT THE UW

- CURRENT SUSTAINABLE PRACTICES AT UW BOTHELL
- CURRENT SUSTAINABLE PRACTICES AT PUBLICATIONS SERVICES
- CURRENT SUSTAINABLE PRACTICES AT THE UW MEDICAL CENTER
- CLIMATE PARTNERSHIP AND GREEN HOUSE GAS EMISSIONS INVENTORY

#### ESAC formed two subcommittees to

focus on two (2) of the numerous issues that affect ES2; 1) waste recycling; and, 2) energy.

The subcommittees presented their findings and recommendations to the entire ESAC member contingent and received approval of the recommendations by all ESAC members.

ANNUAL REPORT

## Recommendations

As policy considerations for Provost Wise and EVP Ihrig based on our committee work to date, ESAC recommends the following policy actions and leadership commitment. Concurrence [by the Provost and EVP] with these recommendations would result in requesting the appropriate administrative units to implement the recommendations and provide assistance as needed to the ESAC committee.

## **RECOMMENDATION 1: NEW BUILDING CONSTRUCTION AND SIGNIFICANT RENOVATIONS**

**METERING**. Mandate the installation of energy metering and appropriate sub-metering for all new buildings, retrofit existing buildings with metering, where feasible.

**NATURAL VENTILATION**. Utilize natural ventilation and mechanical ventilation in lieu of mechanical air conditioning, as appropriate.

#### **RECOMMENDATION 2: ALL BUILDINGS**

**LOW FLOW FUME HOOD.** Recommend to the UW Ventilation Safety Committee that they consider a policy to optimize the use of low flow fume hoods where appropriate. Utilize a life- cycle cost assessment and replace the appropriate older fume hoods through the UW ESCO contract, or other opportunities and/or other replacement strategies.

#### **RECOMMENDATION 3: ACCOUNTABILITY**

**DEPARTMENTAL RESPONSIBILITY**. 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.).

**STRATEGIC PLANNING.** Include environmental stewardship/sustainability initiatives and energy conservation as a part of the annual strategic planning process of each college and unit.

### **RECOMMENDATION 4: ENERGY RELATED PURCHASING**

**ENERGYSTAR**. Through education of clients, buyers, vendors, and UW Purchasing establish directives to optimize the purchase of EnergyStar equipment and devices including: appliances, lights, equipment, motors, fans, electronics, copiers, office equipment, computers, lab equipment, and other electronic devices.

**ENERGY SOURCES**. Use the selection of energy sources that cause the least amount of harm to the environment as a guiding principle for the UW. Commit to the use of renewable energy. Educate the UW community on alternative and feasible energy sources.

## **RECOMMENDATION 5: TRANSPORTATION**

**UNIVERSITY VEHICLES.** Purchase 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.

ANNUAL REPORT

Consider a reduction in the fleet that is not alternative fueled vehicles.

**BICYCLE/PEDESTRIAN INFRASTRUCTURE.** Include bicycle and pedestrian friendly infrastructure in new buildings and major renovations, including installation of shower facilities, where feasible.

# **Recommendation 6:** Integrate the **ES2** philosophy into the diverse UW culture

**ENVIRONMENTAL STEWARDSHIP PRINCIPLES INCORPORATED INTO THE UNIVERSITY LEADERSHIP TRAINING.** Broaden 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.

**PRESIDENTIAL ENVIRONMENTAL STEWARDSHIP FELLOWSHIP(S).** Further scholarship in the area by establishing a competitive Presidential Environmental Stewardship Fellowship(s) and encouraging development of undergraduate and graduate coursework and research projects on campus environmental stewardship.

#### **EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP AWARD**. Recognize accomplishments 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.

## EMPLOYEE EXCELLENCE IN Environmental Stewardship

**RECOGNITION**. Recognize outstanding operational units by extending personal congratulations to recipients of prestigious environmental awards. For example, in 2005:

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

## **RECOMMENDATION 7: EXPAND THE COMMITMENT TO ES2**

**ESAC RESOURCES**. 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.

## **RECOMMENDATION 8: ENERGY EFFICIENT LIGHTING**

#### **COMPACT FLUORESCENT LIGHTING**

It is recommended that the UW adopt a practice of using energy efficient lighting in all 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 for other types of lighting fixtures.

The practice should require:

Avoiding the use of incandescent and halogen lighting in all indoor building lighting, equipment lighting, and task lighting fixtures. Use Compact fluorescent lighting (CFL) in all applications where suitable CFL technology is available. This requirement shall apply to any lighting fixture that receives electricity from the University, including personal or non-University owned equipment.

ANNUAL REPORT

## ESAC-Operations

ESAC launched its second year implementing the University's commitment to environmental stewardship by meeting eight times in 2005. ESAC divided into two subcommittees for several meetings to concentrate on two specific issues: 1) waste recycling and, 2) energy generation, consumption, and conservation. A 0.6 FTE (provided by Environmental Health and Safety) supported ESAC with the coordination of schedules, determining meeting locations, recording meeting minutes and providing preliminary background information. With an established routine and consistent meeting attendance, ESAC moved forward through 2005/2006 to pursue its objectives. The ESAC "Charge" from President Emmert, its schedule, and its budget are provided in Attachment A, B and C, respectively.

## DEVELOPING A MECHANISM FOR ESAC Volunteers

There are many volunteers interested in contributing to environmental stewardship at the University. ESAC recognizes that volunteers' expertise, time, and energy are valuable resources. ESAC developed a mechanism to coordinate volunteers to ensure that the process is efficient and effective. All volunteers will be directed to the ESAC Coordinator. Volunteer assignments will be made based on areas of interest and expertise. This year, several volunteers attended meetings, and assisted the subcommittees by lending their expertise on current practices for energy and paper recycling at the University.

## The First Year-In Review

The first year of ESAC established operations and objectives for the committee. A distinct path was created to enable ESAC to be effective in an advisory capacity. It is apparent that the University is proactive in environmental stewardship and sustainability, but there is so much activity that it is difficult to measure the effectiveness of the activity and to determine if there is a common underlying theme or desired outcome for all the activities ongoing at the University. It is possible that competing priorities that waste resources exist. It is beneficial for the University to collaborate on environmental stewardship and sustainability efforts wherever and whenever possible. This discovery in the first year led ESAC to gather further information and prepare for the second year work.

ANNUAL REPORT

## The Second Year-Objectives, Progress and Status

To increase the visibility of the University's commitment to environmental stewardship and emphasize the high value the University places on environmental stewardship and sustainability, the ESAC members continued to work in the following areas to provide substantive recommendations to the Provost and EVP.

## INCREASED AWARENESS AND COMMUNICATIONS

#### THE WEBSITE

To highlight the accomplishments of the University and share the goals and challenges of environmental stewardship and sustainability, a website was developed in 2005/2006. The web site address is www.washington.edu/about/environmentalste w-ardship.

Additional features will be added as a complementary media strategy.

## **OPERATIONS AND TRACKING**

## Development of an Environmental Management System for the University

The first phase of developing an environmental management system that coordinates specific environmental management goals, policies, operations and continual improvement the University is underway. 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.

## SUBCOMMITTEE WORK

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.

In preparation for the subcommittee work, ESAC held joint meetings in 2005 to gather additional background information and to identify key UW staff, faculty and students to assist the subcommittees in research and data compilation. The goals of the subcommittees included preparing recommendations that can be implemented and that adequately represent the current efforts of the advisory committees and identifying groups at the University that are already working in these two areas. The subcommittees met monthly from December 2005 to April 2006.

The topics reviewed by ESAC and its subcommittees are summarized below.

ANNUAL REPORT

## DISCOVERY

Informational presentations by UW students, faculty and staff provided ESAC to 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.

## CREATION OF A FORMAL UW SUSTAINABLE BUILDING POLICY -[INCORPORATING US GREEN BUILDING COUNCIL (USGBC) LEADERSHIP IN ENERGY AND ENVIRONMENTAL DEVELOPMENT (LEED)]

Over the last two years, the ESAC committee has participated in a significant amount of discussion regarding sustainable buildings at the UW including presentations by Richard Chapman, Associate Vice President for Capital Projects, ESAC committee members and the presentation of one student's Masters Thesis from the Evans School of Public Affairs.

The UW Capital Projects Office (CPO) has been very proactive under Richard Chapman in the delivery of sustainable buildings and is recognized as one of the top university programs nationwide. The UW has three projects which have completed third party review by the USGBC and have been LEED certified. Two of these projects exceeded the original targeted goal and were awarded LEED Silver certification. A fourth LEED project, the Research and Technology Building is currently under review and it is also anticipated to exceed its original target level. In addition, there are six other projects, four that are state funded, which are currently targeted to meet LEED Silver or better. In addition to ten LEED projects, the UW has more LEED Accredited Professionals on staff than any other university on the West Coast, numbering close to 60 accredited professionals.

Following the creation of State Law, ESSB 5509 which requires all state funded buildings above a certain threshold to meet a minimum LEED silver requirement, ESAC was asked to determine if a sustainable high performance building policy would be appropriate and beneficial to the UW.

An ESAC member who has significant LEED experience prepared a white paper on LEED for ESAC to become familiar with the advantages, disadvantages, costs, implementation requirements and benefits of LEED and its impact on the University's future in sustainability. ESAC reviewed the paper and discussed extensively the impact of embracing LEED at the University.

#### FINDING

A formal policy regarding sustainable high performance buildings would be of benefit to the UW.

LEED is a viable tool and should be appropriately included in the policy.

ESAC has offered to form a task force to work with Capital Projects, Real Estate and other interested parties to formulate a Sustainable High Performance Building Policy for the UW.

ANNUAL REPORT

## CURRENT GLOBAL SUSTAINABLE PRACTICES AT THE UNIVERSITY

#### **BIODIESEL FUEL**

A presentation by David Carr, Manager of Motor Pool, revealed that the UW has put into place several sustainable practices. For instance, Facilities Services Motor Pool and Capital Projects are collaborating on an alternative fuel project with the biodiesel alliance of the City of Seattle. Efforts are being made to get biodiesel on the state's purchasing list. Motor Pool is retrofitting several UW vehicles to burn biodiesel fuel.

#### FINDING

The University is taking a proactive role in the potential use of biodiesel. Motor Pool will keep ESAC informed to ensure that research on the feasibility of alternative fuels remains a priority at the University.

## ENERGY CONSUMPTION MONITORING AND MEASUREMENT

A presentation by UW Facilities Services demonstrated that this unit is working on a program with Housing and Food Services to track energy consumption. It will address the growth rates of the campus population and the number of buildings on Campus to maintain a normalization of the data compiled by the program. The data is influenced by: 1) feeding hours; 2) weather and, 3) the number of meetings or conferences in the residences.

#### FINDING

Facilities Services will continue to pursue methods for monitoring and measuring energy consumption on Campus. It continues to be a challenge and perhaps a barrier to determine the most beneficial and feasible use of alternative energy and building components that support sustainability at the University.

## WASTE RECYCLING AND REDUCTION EFFORTS

The University's Waste Reduction and Recycling Advisory Committee (WRRAC) presented the progress towards its goals in 2005/2006, as well as its barriers to increasing the amount of recycled and/or reduced waste at the University. Based on the information provided by WRRAC, the ESAC subcommittee was able to avoid duplication and focus its efforts on: 1) supporting WRRAC goals; and, 2) reducing paper consumption and purchases, as well as paper recycling.

#### FINDING

WRRAC has a progressive process in place to reduce and recycle waste. WRRAC joined the ESAC waste recycling subcommittee to assist in planning and focusing the objectives for the subcommittee. Paper is the single largest component of the waste stream that continues to challenge WRRAC in waste volume reduction and recycling. Therefore the subcommittee decided to further delineate its focus from "waste" recycling to "paper" recycling. Also, the subcommittee met with purchasing to address paper purchases and consumption, in an effort to reduce the waste stream by reducing paper purchases.

ANNUAL REPORT

# CURRENT SUSTAINABLE PRACTICES AT BOTHELL

The UW Bothell Campus has worked diligently to incorporate ES2 into its master plan with an eye toward future generations. It has implemented state of the art buildings designed for energy and water conservation. The buildings are equipped with monitoring equipment to accumulate electricity, water, and energy consumption measurements. The UW Bothell Campus recycles 100% of its cardboard and paper. Worm bins are used to recycle food waste with a cooperative agreement with Subway Foods. The worms generate compost that is used at the Campus for grounds maintenance. Only two "green" cleaning products are used campus wide: 1)for heavy duty cleaning; and, 2) for disinfectant. The Campus is located on wetlands that are being reclaimed and restored in cooperation with Cascadia Community College and the City of Bothell. The wetlands provide the UW Bothell Campus with education and interpretative opportunities for students, faculty, staff and the surrounding community to learn about ecosystems.

#### FINDING

The UW Bothell Campus is exemplary in its commitment to ES2. The current monitoring and measurement techniques could be used as a model for the Seattle and Tacoma Campuses.

#### CURRENT SUSTAINABLE PRACTICES AT PUBLICATIONS SERVICES

Publication Services (PS) demonstrates its commitment to ES2 in its written goals and objectives. It exceeds state requirements with environmentally respectful practices, being among the first in the region to utilize inks and papers that conserve natural resources and minimize environmental toxins.

Its current practices include: 1)maintaining a hazardous waste and pollution prevention program under the guidance of EH&S; 2)offering web publishing and e-communication services to clients; 3)emphasizing eco-friendly alternatives such as recycling recommendations; 4)recycling all cardboard and paper through a contractor; 5)using vegetable (soy) oil-based inks in presses rather than petroleum–based ink. (This reduces volatile organic compound (VOC) emissions and the volume of hazardous waste generated); and 6)providing a fact sheet on sustainability to clients as a decision-making tool and for training activities.

PS future goals include, but are not limited to:

1)Compliance with state mandates in the Washington State Governor Executive Order 05-01, September 1, 2009 to:

- Increase the percentage of preferable paper purchased to at least 50%.
- Recycle 100% of used office paper.
- Use 100% recycled content paper with a minimum of 50% post consumer waste.

2)Use 100% recycled stock at copy centers
3)Recycle 100% of used office paper.
4)Explore further integration of "Direct – to Plate" Technology to eliminate the need for film and metal plates.

5)Continue to provide environmentally friendly options and educate clients on these choices. 6)Continue in their commitment to digital services.

Publication Services' demonstrates its commitment to ES2 when it sends out postcards instead of printing full paper

#### ANNUAL REPORT

marketing materials. It is a large department with a sustainability commitment that has been in place for over ten years.

Statistics provided by PS include:

- Copy services make 110.8 million impressions (not copies) per year.
- Over two million impressions are made in coin-operated machines around campus.
- The majority of work done by PS is custom printing.

PS also informed ESAC on the difference(s) in definitions for "recycled" and "post-consumer". Recycled means, any recycled content. Postconsumer paper means, it was used by a consumer, and then Weyerhaeuser Co recycled it Pre-consumer paper means, paper that had never been used, and has not been stained with ink.

#### FINDINGS

 The two barriers identified by PS for using recycled paper are: a)100% recycled paper catches in the copy machines; and, b)recycled paper is difficult for some people to read.
 Brighter paper is easier to read.
 A barrier to purchase recycled paper was identified. The UW departments are on restricted budgets, therefore they will buy cheaper paper (recycled is generally more expensive) to meet their budgets, particularly with ProCard availability. A suggestion was made to focus on what we can control and do what we can within the UW network to make recycling work, and to ensure that we do what we can to encourage recycling.

# CURRENT SUSTAINABLE PRACTICES AT THE UW MEDICAL CENTER

Representatives from the UW Medical Center, Patricia Riley, Administrative Assistant, Support Services, and Gary Butrymowicz, Director, Environmental Services, provided ESAC with a presentation on two awards received by UWMC for 1) eliminating the use of significant toxic chemicals, 2) conserving water and energy, reducing waste, and 3) supporting the regional community.

The UWMC won the award based on their ability to show that there are benefits to reducing or eliminating the use of toxic materials, preventing the generation of solid waste and hazardous waste, reducing polluted emissions to the air and discharges to the water, and making efficient use of natural resources. They also demonstrated excellence in leadership through their commitment to environmental quality and their willingness to share their knowledge of pollution prevention and sustainable practices. The UWMC success includes, but is not limited to:

- Elimination of the use of mercury.
- Use of a less toxic chemical for cold chemical disinfection.
- A reduction in water consumption by 28 million gallons per year by: 1) installing a closed loop laundry system; 2)allowing patients to opt out of linen changes; and, 3)using an alternative floor mopping system that reduces disinfectant water by 96%, from 75 gallons to 3 gallons per custodian per day.
- A reduction in the use of electricity by replacing and/or retrofitting older equipment.
- A reduction in regulated medical waste generation from 950,000 pounds in 2002 to 664, 570 pounds in 2004.

ANNUAL REPORT

• A 27% reduction in operating room waste achieved through training and process design changes.

The presenters discussed what enabled the UWMC to achieve these successes and reiterated that it is a team effort. Their team included a staff of enthusiastic and environmentallyoriented personnel, vendors who were willing to partner with UWMC to improve processes, the community of Seattle, and a great deal of support, motivation and technical assistance from the Programs Operation Coordinator of EH&S, Sheila Lockwood.



#### FINDING

UWMC is another example of ES2 in action at the University. ESAC plans to openly communicate these successes in the hopes that other departments will embrace ES2 with equal enthusiasm.

## **ESAC** IN ACTION

There were several discussions early in the 2005/2006 ESAC season around the attention to Climate Change, Global Warming, and Green House Gas Emissions by the State of Washington and in particular, the Mayor of Seattle, Greg Nichols.

## CLIMATE PARTNERSHIP AND GREEN HOUSE GAS EMISSIONS INVENTORY

The University is fortunate to have an expert on Green House Gas Emissions in its midst, Roeland Hammerschlag, who spearheaded the cause to help the University identify its GHG baseline. In addition, the University has several talented, "environmentally oriented and aware" staff and faculty who have already begun working in this endeavor to conserve energy and create cost savings for the University. A team made up of faculty, staff and students was created to collaborate on data, guidance and support for Mr. Hammerschlag. This effort enabled him to quickly develop a GHG Inventory for the UW. He presented his findings to ESAC in June 2006, and will continue to work on the inventory through the summer with the City of Seattle, King County, and the local air pollution control agencies.

Also in 2005/2006, President Emmert agreed to participate as a founding partner in the Climate Partnership with the City of Seattle. This partnership is evolving and will develop a commitments (to be published) for the regulated business community to embrace reducing green house gases and improve the air quality in Puget Sound area and all of Washington State.

ANNUAL REPORT

## Recommendations

As policy considerations for Provost Wise and EVP Ihrig based on our committee work to date, ESAC recommends the following policy actions and leadership commitment. Concurrence [by the Provost and EVP] with these recommendations would result in requesting the appropriate administrative units to implement the recommendations and provide assistance as needed to the ESAC committee.

## **RECOMMENDATION 1: NEW BUILDING CONSTRUCTION AND SIGNIFICANT RENOVATIONS**

**METERING**. Mandate the installation of energy metering and appropriate sub-metering for all new buildings, retrofit existing buildings with metering, where feasible.

**NATURAL VENTILATION**. Utilize natural ventilation and mechanical ventilation in lieu of mechanical air conditioning, as appropriate.

#### **RECOMMENDATION 2: ALL BUILDINGS**

**Low FLOW FUME HOOD.** Recommend to the UW Ventilation Safety Committee that they consider a policy to optimize the use of low flow fume hoods where appropriate. Utilize a life- cycle cost assessment and replace the appropriate older fume hoods through the UW ESCO contract, or other opportunities and/or other replacement strategies.

#### **RECOMMENDATION 3: ACCOUNTABILITY**

**DEPARTMENTAL RESPONSIBILITY**. 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.).

**STRATEGIC PLANNING.** Include environmental stewardship/sustainability initiatives and energy conservation as a part of the annual strategic planning process of each college and unit.

#### **RECOMMENDATION 4: ENERGY RELATED PURCHASING**

**ENERGYSTAR**. Through education of clients, buyers, vendors, and UW Purchasing establish directives to optimize the purchase of EnergyStar equipment and devices including: appliances, lights, equipment, motors, fans, electronics, copiers, office equipment, computers, lab equipment, and other electronic devices.

**ENERGY SOURCES**. Use the selection of energy sources that cause the least amount of harm to the environment as a guiding principle for the UW. Commit to the use of renewable energy. Educate the UW community on alternative and feasible energy sources.

## **Recommendation 5: Transportation**

**UNIVERSITY VEHICLES.** Purchase 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.

ANNUAL REPORT

Consider a reduction in the fleet that is not alternative fueled vehicles.

#### BICYCLE/PEDESTRIAN INFRASTRUCTURE.

Include bicycle and pedestrian friendly infrastructure in new buildings and major renovations, including installation of shower facilities, where feasible.

## **RECOMMENDATION 6: INTEGRATE THE ES2** PHILOSOPHY INTO THE DIVERSE UW CULTURE

#### ENVIRONMENTAL STEWARDSHIP Principles incorporated into the University Leadership Training.

Broaden 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.

#### **PRESIDENTIAL ENVIRONMENTAL STEWARDSHIP FELLOWSHIP(S).** Further scholarship in the area by establishing a competitive Presidential Environmental Stewardship Fellowship(s) and encouraging development of undergraduate and graduate coursework and research projects on campus environmental stewardship.

#### **EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP AWARD.** Recognize

accomplishments 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.

## EMPLOYEE EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP

**RECOGNITION.** Recognize outstanding operational units by extending personal

congratulations to recipients of prestigious environmental awards. For example, in 2005:

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

## **RECOMMENDATION 7: EXPAND THE COMMITMENT TO ES2**

**ESAC RESOURCES**. 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

## **RECOMMENDATION 8: ENERGY EFFICIENT LIGHTING**

#### **COMPACT FLUORESCENT LIGHTING**

It is recommended that the UW adopt a practice of using energy efficient lighting in all 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 for other types of lighting fixtures.

The practice should require:

Avoiding the use of incandescent and halogen lighting in all indoor building lighting, equipment lighting, and task lighting fixtures. Use Compact fluorescent lighting (CFL) in all applications where suitable CFL technology is available. This requirement shall apply to any lighting fixture that receives electricity from the University, including personal or non-University owned equipment.

ANNUAL REPORT

# Future ESAC Actions - 2006/2007

In addition to the continuation of work on the recommended actions above, ESAC will also focus on the following actions during 2006/2007.

# ACTION 1: FURTHER COLLABORATION OF STUDENTS, FACULTY AND STAFF

Enhance problem-solving on environmental issues by providing support for students to engage in environmental stewardship projects. The identification of potential student/academic projects will be developed, including possibilities for students in all academic programs including but not limited to engineering, business, economics or a capstone project

## PAPER RECYCLING

## **ACTION 2: DOUBLE SIDED COPIES**

ESAC needs to further determine feasibility of requiring double-sided copier and printer defaultsetting on all the copiers and printers that have this capability.

To accomplish this, ESAC will invite technical representative from UW vendors for copiers and printers will be invited to the paper recycling subcommittee meeting to discuss implications. How much will it cost to reset all copy machines and printers? Does double-sided copying reduce longterm function of machine or maintenance cost? Does the benefit of reducing paper outweigh the cost of changing defaults? Is it possible to offer a discounted rate on paper to UW departments to use double-sided copying? What is the feasibility of a pilot project? Are printers in computer labs run by departments, C&C, publications?

### ACTION 3: PURCHASING COLLABORATIONS

ESAC will request that Purchasing and Publications provide any data on types and quantities of paper consumed and frequency of purchases for the past 3 years.

#### **ACTION 4: E-PUBLISHING MANDATE**

ESAC will discuss with representatives from UWeek and the Daily (and other circulated publications) about evaluation of the resources to produce the newspapers, and feasibility of the option of making it e-copy only (or reducing print quantity). Is it feasible to use electronic newspapers and notices as opposed to printed copies?

Request a list of other distributed newspapers on campus from Purchasing(excluding pro-card purchases).

#### ACTION 5: ES2 CONTRACT LANGUAGE

ESAC will discuss inclusion of environmental stewardship language (e.g., incentives for duplex capabilities) into contracts for printers, copiers, etc. ESAC will also review with the appropriate parties, the feasibility of negotiating contracts on printers with capability of two-sided pages, and promoting a campaign to encourage the purchase of duplexcapable printers and education for using two side printing feature.

ANNUAL REPORT

## ENERGY GENERATION, CONSUMPTION AND CONSERVATION (EG:2C)

## ACTION 6: NEW BUILDING CONSTRUCTION AND SIGNIFICANT RENOVATIONS

#### **ENERGY TARGETING OF CAPITAL PROJECTS**

**OFFICE (CPO) PROJECTS.** An effort will be made to identify aggressive energy targets for all CPO projects based on current technology and engineering. Targets should exceed the standards set by state and local energy codes (Thresholds to be determined).

#### **INCREASED HEIGHT OF**

**BUILDINGS/DENSITY**. ESAC will continue to develop information to consider an increase in the height of new buildings where allowable in order to increase density, decrease transportation and maintain open space at ground level. Investigate changes to UW internal policy in the next Campus Plan.

#### **ACTION 7: ALL BUILDINGS**

#### SUSTAINABILITY COORDINATOR NETWORK.

ESAC will explore the feasibility of developing a Sustainability Coordinator network similar to building coordinator network that will establish a point person in each building who takes on the role of education and training on sustainability issues and activities. Discuss the impact of creating this network with Human Resources.

**COMFORT.** Identify "expanded range" comfort policy along the lines of American Society of Heating, Refrigerating and Air-Conditioning Engineers Standards for human comfort (ASHRAE) 55 to provide facilities managers with specific policy to defer to. **LOCALLY HARVESTED**. ESAC will explore the benefit of preferentially purchasing food and other products that are harvested or manufactured within the local region (defined as Washington, Oregon, and lower British Columbia) to reduce transportation and energy consumption. ESAC plans to review this recommendation with Housing and Food Services and UW Medical Center regarding feasibility

# **OVERALL BUILDING POLICY.** ESAC will coordinate an advisory team or task force to address a building policy that incorporates the LEED standard.

#### ACTION 8: GREEN HOUSE GAS INVENTORY TEAM PARTICIPATION

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 2006)."

#### ACTION 9: FUTURE AREAS OF INTEREST

- ESAC plans to visit Merrill Hall to see the operation of a LEED building.
- ESAC will request 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 will be made to ESAC members who have requested more information regarding several environmental stewardship/management areas, such as:

#### ANNUAL REPORT

clean energy; opportunities to monitor and/or audit water; solid waste recycling improvements; wetlands; the economic aspects of sustainability/life cycle costs; student projects in urban planning; UW sustainability efforts in Publications Services; potential use of biofuels/motor pool efforts; water issues being faced; waste issues; general environmental hazards; indoor and outdoor air quality; and, purchasing policies.

ANNUAL REPORT

## Attachments

#### ANNUAL REPORT

#### Attachment A The ESAC Members 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.

#### \* Extracted from the UW Environmental Stewardship Policy Statement

#### ANNUAL REPORT

#### Attachment B ESAC Meeting Schedule 2005 – 2006

Month	Day	Year
October	26	2005
November	30	2005
December	28 *	2005
January **	5	2006
February **	22	2006
March **	29	2006
April **	19	2006
April	26	2006
May	31	2006
June	22	2006

\* The December 2005 meeting was not held due to the holiday season.

**\*\*** Subcommittee meetings were held to place a concentration in the two areas selected as priority goals for the 2005-2006 ESAC Season

#### ANNUAL REPORT

#### Attachment C - ESAC Costs

	2005						2006						
Cash Flow	JUL	AUG	SEP	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Cash Remaining
Annual Budget	Jez						J					Joir	Including
Balance from previous month	(\$ 110)	(\$ 110)	\$890	\$ 890	\$ 852	\$ 814	\$ 814	\$ 814	\$814	(\$957.44)	(\$817.44)*	(\$817.44)*	(\$817.44)*
Budget Allocation for 2005/2006		\$ 1,000	n		n – – –	n							
Expenses													
Materials Preparation *													
Room & Equipment Rental				\$ 38	\$ 38					\$ 63	Ş		
Website Development									\$1,771.44				
Publications													
Advertising													
Speakers													
Cash Balance	(\$ 110)	\$890	\$ 890	\$ 852	\$ 814	\$ 814	\$ 814	\$814	(\$957.44)*	(\$817.44)*	(\$817.44)*	(\$817.44)*	(\$817.44)*
* Absorbed by EH&S													<mark>(\$817.44)*</mark>