SEATTLE UNIVERSITY

Deepening and Advancing The Commitment to Sustainability

Seattle University's Climate Action Plan

2010 - 2035

Version 1.2

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Executive Summary

Seattle University

Seattle University is guided by its Jesuit heritage and is dedicated to "educating the whole person, to professional formation, and to empowering leaders for a just and humane world." Individuals are educated to not just be informed about social justice, but to be committed to, to act upon, and to be leaders in advancing social justice. The university recognizes that it is not possible to have a just and humane world without ecological justice. Social justice cannot exist without a commitment to sustainability.

Historical Commitment to Sustainability

Beginning with sustainable landscaping practices in the 1960s, the university's practices evolved to include energy conservation, expanded recycling, an on-site composting program, and a variety of programs to promote alternative forms of transportation. Today, sustainability is also found throughout the curriculum in teaching, learning, research and scholarship, and strategic plans. The institution's strategic directions state that the university must "demonstrate environmental leadership by developing solutions for our resource challenges." The university acknowledged this commitment publicly when it joined the City of Seattle's Climate Partnership and the American College and University Presidents Climate Commitment.

Deepening and advancing sustainability is the university's new pledge.

When Seattle University joined the Presidents Climate Commitment, it was pledging to further *deepen* and *strengthen* its commitment to sustainability. This Climate Action Plan describes and states the university's intensions to more comprehensively address climate change and advance sustainability. The plan outlines the current state of sustainability, goals, strategies for achieving future targets, and suggestions for funding sources and tracking progress.

The university has set four goals to deepen and strengthen sustainability:

Goal 1. Expand sustainability in the curriculum
Goal 2. Expand sustainability in student development programs
Goal 3. Increase sustainable practices in university operations
Goal 4. Share knowledge with others

The university's leadership in sustainability is reflected in engagement with others, both in the classroom and out into the community. The university will deepen its engagement with others through collaboration and by communicating its strategies, goals and results. Progress towards achieving Climate Action Plan goals will be tracked and reported annually to the President's Committee for Sustainability, the President and campus community. The President's Committee for Sustainability will publish an Annual Sustainability Report to communicate the university's progress.

The University's Carbon Footprint

University operations produce the greenhouse gas emissions that impact climate change. Greenhouse gas emissions are a way to measure the sustainability of university operations. Reducing greenhouse gas emissions will move Seattle University closer to climate neutrality. In December 2009, the university estimated that it annually emits 24,607 metric tons of emissions. Table 1 outlines the operational activities that contribute to emissions.

Table 1. 2009 Sources of Emissions

Activity	Metric Tons	Percent
Air Travel (Staff & Students)	10,994	44%
Commuting (Staff & Students)	8,250	34%
Energy	4,996	20%
Landfilled Waste	215	1%
Vehicles and Equipment	129	.5%
Other	23	.09%
Total	24,607	100%

Note: Figures may not sum to total due to rounding.

Commitment to Reduce Carbon Footprint

As a signatory to the American College and University Presidents Climate Commitment (ACUPCC), Seattle University is committed to work towards climate neutrality, or zero emissions. The initial commitment is to reduce emissions by at least 12% by 2020 and by at least 51% by 2035. The university will implement a series of facilities improvement measures; improve the efficiency of campus vehicles and equipment; increase reduction, reuse, recycling, and composting activities; and decrease the percent of staff that drive alone to work.

While the university is committed to reducing emissions through projects and programs, it recognizes it will be unable to remove 100% of emissions through its own actions. In the future, the university will evaluate the use of high-quality offsets as a supplemental strategy for achieving climate neutrality.

Seattle University

Mission

Seattle University is dedicated to educating the whole person, to professional formation, and to empowering leaders for a just and humane world.

Vision

We will be the premier independent university of the Northwest in academic quality, Jesuit Catholic inspiration, and service to society.

Values

Care
We put the good of students first.

Academic Excellence
We value excellence in learning with great teachers who are active scholars.

Diversity
We celebrate educational excellence achieved through diversity.

Faith
We treasure our Jesuit Catholic ethos and the enrichment from many faiths of our university community.

Justice
We foster a concern for justice and the competence to promote it.

Leadership
We seek to develop responsible leaders committed to the common good.

About Seattle University

Founded in 1891, Seattle University is a multi-disciplinary, independent Jesuit Catholic university located in the urban center of Seattle, Washington. More than 7,750 students are enrolled in undergraduate and graduate programs within eight schools and colleges.

The Mission

The university is dedicated to educating the whole person, to professional formation, and to empowering leaders for a just and humane world. Individuals are educated to not just be informed about social justice, but to be committed to, to act upon, and be leaders in advancing social justice. The university recognizes that it is not possible to have a just and humane world without ecological justice. Social justice cannot exist without a commitment to sustainability.

Jesuit Catholic Heritage

Seattle University is one of 28 Jesuit colleges and universities in the United States. A Jesuit education challenges students to think clearly and independently, and to test commonly accepted beliefs. Students are encouraged to grow personally and spiritually, develop and test their values, create a sense of responsibility for themselves and their community, and learn to make ethical choices in their lives. They learn to balance self-reliance with interdependence, knowledge with spirituality, and mind with heart. The Jesuit educational tradition promotes independent critical thinkers, challenged by the Jesuit priority of "the service of faith and the promotion of justice" to address issues of poverty, injustice, discrimination, violence, and the environment in knowledgeable, committed, and effective ways.

A University in the City

This culturally diverse university is spread over 50 acres and 35 buildings at the edge of Seattle's central business district. The campus is very compact, promoting a walkable, livable community experience. The university's neighborhood includes mixed-use development, high-density housing, commercial areas, hospitals, and educational institutions. The City of Seattle is a recognized leader in the effort to minimize climate change. In December 2009, the City reported it reduced greenhouse gas emissions to 7 percent of 1990 levels, three years ahead of schedule. The City's broad-ranging strategies – including investing in transportation choices, encouraging compact communities, and promoting clean energy and conservation – influence the university's own efforts towards sustainability and addressing climate change.

Commitment to Sustainability

Definition of Sustainability

The term "sustainability" represents many different perspectives, and is often defined in different ways. The exploration of sustainability at Seattle University is guided by three points of view:

1. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[i]

2. Development that "replaces the use of nonrenewable resources with renewable ones and reduces the consumption of all resources. It entails reuse, recovery, and recycling wherever possible; and replenishment or restoration of the natural balances affected by our actions. Sustainable development will succeed only if it expands to include a vision of sustainable communities which hold all creation as sacred."[ii]

3. A decision making framework that treats the economy, environment, and society as a tightly interconnected system. Attention is focused on all three areas simultaneously to maintain balance and ensure decisions lead to positive economic, environmental, and societal impacts. For example, one might ask: "How might we design our buildings in a way that increases the university's prosperity, provides bird habitat and improves occupants' health?" A design that responds to all three might be a building that produces more energy than it uses, has a roof with plants and windows that open.

History of Sustainability at Seattle University

The university's inspiration to advance sustainability is a continuation of its historic commitment to sustainability. The commitment to sustainability began with ecological preservation in the 1960's. Since the 1960's, practices expanded to include sustainable landscaping, strategic energy conservation, and waste management and transportation programs. The university also recognized the growing interest in these areas by creating new positions and offices.

<u>Ecological Preservation</u>

In the 1960's, Father Raymond Nichols began working with Fujitaro Kubota on landscape design and planting trees around the campus. Father Nichols and Mr. Kubota, a self-taught landscaper, rescued trees from throughout the Puget Sound area that would have otherwise been cut down and destroyed. Many of the spared trees were replanted on the campus. This work began the longstanding effort to create sustainable landscape on the university's campus.

Sustainable landscaping practices deepened in the 1980's when the head of the Grounds Department, Ciscoe Morris, eliminated pesticide use on campus grounds. In place of the pesticides, Morris released more than 20,000 lacewings. These beneficial insects consumed aphids that had infested trees on campus. This effort led to a commitment to pesticide-free gardening practices. Today, these practices include creating and using compost to fertilize campus grounds.

Waste Reduction Initiatives

In the early 1980's, the Environmental Safety Coordinator position began. The position was created to advance sustainable practices at the university. In 1988, a paper, glass, and metal recycling program began, followed by hiring the first Recycling Coordinator in 1992. In 1993, the Office of Environmental Services was created to oversee recycling and waste prevention, and later, the composting program.

In 1994, Father William Sullivan accepted an Environmental Excellence Award from the Rotary Club of Seattle, on behalf of the university. The award recognized the university's recycling program. The award also brought to Father Sullivan's attention the importance of the university's recycling program to the campus and its global environment. This recognition prompted Father Sullivan to pose the question "What else can we do?". With this acknowledgement and support, the Facilities Department broadened its waste reduction efforts to reduce the university's environmental impact.

In 1995, the composting program began, and in 2003, the university launched its on-site composting facility. In 2005, a Campus Sustainability Manager position was created to reflect additional sustainability-related responsibilities. The position was charged with guiding the growth and planning for environmentally sound practices throughout the university.

Energy Conservation

Facilities Services began installing efficient technologies in the early 1990's with the support of rebates from Seattle City Light for energy conservation. In 1995, the efforts were formalized with the creation of the Energy Conservation Committee. The university has received more than $1 million in utility incentives to complete energy conservation projects since the mid-1990s. These projects helped minimize increases in utility consumption. From 1999 to 2009 building square footage increased by 17% and total enrollment increased by 33%, but utility consumption increased by only 3%.

Commuting: Travel to and from campus

Since 1991, in accordance with Washington commute trip reduction law, the university has implemented programs to reduce drive-alone rates to campus. The law was enacted to foster public and private partnerships that would encourage commuters to use alternative modes instead of driving alone to work every day. The university is also subject to the City's Transportation Management Programming (TMP). The TMP requires large buildings and developments to reduce traffic and parking impacts on surrounding neighborhoods. As of 2007, 39% of the university population reported driving alone to campus. The university has established a goal of 35% for the future.

Sustainability Today

Today, the commitment to sustainability is expressed to students, neighbors, faculty, and staff in many ways throughout campus. Examples of this commitment include:

- High school students touring campus will start at the new Admission and Alumni Relations center. Constructed in 2009, the LEED Gold building has zero carbon footprint. Visitors learn how and why the university preserved 84% of the existing building, installed a green roof, installed a cistern to collect rainwater, and installed solar panels.

- Students passionate about environmental justice can live on a sustainability themed floor in Bellarmine Hall. The Outdoor Adventure and Recreation program ensures hands-on learning by offering training to trip leaders and students in environmental ethics and leave-no-trace principles. Student clubs; such as the Society for Environmental Engineers and Scientists, offer learning and application of sustainability-related skills. The Sustainable University Revolving Fund provides funding for student proposed conservation projects that pay back the loan in lower utility costs.

- In the classroom, students experience sustainability in both practice and formal education. Temperature in a number of academic and office buildings is automatically regulated, and lights turn on and off automatically. Academic exploration of sustainability occurs in courses that examine subjects such as the impact food choices have on the larger world; global climate change; renewable energy systems; transportation engineering; environmental law and impact; an organization's corporate social responsibility report; and Christianity in the face of the environmental crisis.

- Neighbors walking their dog through campus or recreating on green space enjoy clean and safe grounds. They see trash, recycling and compost bins spread around the campus. Each year the on-campus compost facility turns approximately 27 tons of chipped tree trimmings and 50,000 pounds of food scraps into compost used to enrich the campus's landscape, which is pesticide-free and designated as a wildlife sanctuary. Faculty or staff members contemplating how to integrate sustainability into their class or department may be inspired by the Taqwsheblu Vi Hilbert Ethnobotanical Garden or solar panels on campus. The garden inspires study about the intimate and sophisticated relationship between Puget Sound-area Native peoples and our region's native plants. The solar panels are a demonstration project developed in partnership between Facilities Services, Seattle City Light, and students in mechanical engineering.

These visible examples of sustainability represent the commitment, values, interests, planning and practices that have led to a sustainable experience on campus. These efforts have led to numerous awards. Some of these awards include: designation as a wildlife sanctuary and habitat by the Washington State Department of Fish and Wildlife (1989) and the National Wildlife Federation (2007); recognition by Washington CEO Magazine (2008) for landscaping practices and pre-consumer compost programs; an award for Outstanding Achievement in Resource Conservation by Seattle Public Utilities (2007); and the Seattle City Light's Power Player Award (2004) for demonstrating outstanding leadership and commitment to energy efficiency.

Deepening the Commitment to Sustainability

In the past few years, the university has deepened and formalized its commitment through strategic plans, committees, and by signing public commitments and pacts related to sustainability and climate. Recent strategic planning has placed a greater emphasis on sustainable solutions in advancing university priorities. Sustainability is now included in the following strategic plans:

Strategic Directions 2008 – 2013
This university-wide plan includes five strategic priorities that advance the university mission: Academic Excellence, Global Education, Catholic Character, NCAA Division I Athletics, and Formation for Leadership. The plan states that the university must "demonstrate environmental leadership by developing sustainable solutions for our resource challenges." It is understood that the physical and technological resources and infrastructure required to achieve these strategic directions must also be sustainable.

Academic Strategic Action Plan 2009 – 2014
The plan identifies six interdependent initiatives that advance academic excellence. The initiatives assure that all graduate and undergraduate students experience an integrated Jesuit education for leadership. Sustainability is identified as a priority in both the undergraduate and graduate curriculum.

Sustainable Master Plan 2008
The plan provides a road map for the campus to deepen its commitment to sustainability in the physical development of campus. The areas under consideration are: a climate neutral campus, reducing energy and water consumption, improving ecological systems, and supporting human well-being. Sustainability will be achieved by designing and renovating buildings that are healthy, safe, improve cognitive function, and encourage social dynamics.

Facilities Master Plan 2006 – 2026
A primary goal of the plan is to "incorporate the principles of sustainable design in all aspects of site and building design, construction, maintenance and operation." The sustainability principles guiding this goal include: designing building and renovation projects to achieve a LEED Gold rating; harmonizing the human built environment with natural systems; making sustainable features visible and available as learning and teaching opportunities; and building structures for permanence and quality. The master plan also includes developing a more pedestrian-oriented campus that supports neighborhood revitalization, and calls for a greater use of public transit.

Housing Master Plan 2009
The Housing Master plan calls for increasing the number of undergraduate students living on campus from approximately 40% to 60% by 2017. This would increase the current 1,800 beds on campus to more than 3,000 beds. The result is an ever more compact, livable, and walkable community environment that reduces the use of vehicles.

Committees and Task Forces

Sustainability-related committees, task forces, and clubs have taken shape over the past few years. These groups represent campus as a whole, individual colleges and schools, and students. Examples of such committees include:

- Environmental Advisory Council (EAC): A student initiative led to the creation of the Environmental Advisory Council in 2004. The purpose was to offer advice and leadership regarding the identification, creation, assessment, and implementation of environmental planning and policies for the university. The council acted as a catalyst for campus sustainability and environmental initiatives from students, administrators, staff, and faculty. The EAC was restructured into the President's Committee for Sustainability as part of the Climate Action Plan.

- Albers School of Business and Economics Sustainability Task Force: The Albers Sustainability Task Force (STF) was formed in September 2008 to assess and make a recommendation to the Dean about sustainability programming in the business school. The STF assessed how and where sustainability appears in undergraduate and graduate business school curriculum; how other MBA programs address sustainability; and whether area employers seek students for sustainability-related jobs. In May 2009, the STF recommended that "official" sustainability programs (majors, minors, specializations, etc.) not be introduced. Instead, the obvious momentum and interest in sustainability—both internally and in corporations —should grow and mature. The STF also recommended that it continue as an ongoing entity to serve as a clearinghouse for sustainability activities in Albers, to continue to monitor trends outside the university, and to support cross-school collaboration on sustainability courses and programs.

- Sustainable University Revolving Fund (SURF): The purpose of SURF is to provide students with financial resources to accomplish projects they identify as priorities. The group manages a self-sustaining fund to support sustainability projects. The SURF works on the principle that each project that it funds will have a return on investment in energy or resource savings. These savings, once accrued, will return to the general pool of capital available to finance additional student-driven projects.

- Society of Environmental Engineers and Scientists (SEES): SEES promotes environmental awareness and responsibility by educating students in contemporary environmental issues. Their vision is that students carry awareness and accountability learned through SEES experiences into their future professional and personal decisions.

Public Commitments

The university has publicly acknowledged its commitment to sustainability, both locally and nationally. These acknowledgements include:

- The Seattle Climate Partnership: The University joined the City of Seattle's Climate Partnership in 2006. The partnership is a voluntary pact among Seattle-area employers to reduce their greenhouse gas emissions. Together, these employers helped the City meet its community-wide goal three years ahead of schedule. The city met and beat global warming pollution reduction target of the Kyoto Protocol by reducing emissions to 7 percent below 1990 levels.

- The American College and University Presidents Climate Commitment: In February 2007, President Stephen Sundborg, S.J., signed the American College & University Presidents' Climate Commitment. This commitment is a pledge to advance sustainability and address climate change through education, research, non-classroom programs, reducing greenhouse gas emissions, and sharing knowledge. The pledge is enacted through this Climate Action Plan.

About the Climate Action Plan

This Climate Action Plan (CAP) is intended to guide Seattle University in furthering its commitment to sustainability and to addressing climate change. The university envisions a campus community in which the value and philosophy of sustainability is integrated in all university's activities. This goal will be achieved when:

- All students can articulate sustainability and its relevance to their field of study
- University operations avoid or limit a negative impact on the environment
- Sustainability is a component of all campus decision making processes
- The community recognizes sustainability as a primary university value

The pursuit of these goals will reflect transparency, collaboration, and inclusion. The goals will be advanced through education, research, student development programs, operations, and knowledge-sharing, with the following goals:

1. Expand sustainability in the curriculum
2. Expand sustainability-related student programs
3. Increase sustainable practices in university operations
4. Share knowledge with others

The CAP is intended to be an evolving document. As circumstances, regulations and technologies change, and progress is made towards achieving these goals, the university's priorities and approaches may be adjusted. The CAP will be updated accordingly.

The President's Committee for Sustainability (Appendix A) will provide oversight of the plan's goals and progress. The Committee will report at least annually to the President, and more frequently, as needed. The Committee will work with Marketing and Communications to report progress to the campus and community. The CAP progress reports will be made to the ACUPCC every two years, beginning January 2012.

Development Process

Work on the CAP began shortly after the university joined the President's Climate Commitment in 2007. Facilities Services began measuring greenhouse gas emissions and developing an operations plan to achieve climate neutrality. In Fall 2009, the Associate Vice President of Facilities, the Director of the MBA Program from the Albers School, and the Director of Wellness and Health Promotion were designated to oversee the drafting of the CAP.

During fall 2009, meetings with the university executive team, deans, student development directors, students, operations staff and other stakeholders were held to assess the state of sustainability in their areas. A survey was distributed to all faculty members to assess sustainability in academics. The CAP was drafted in winter 2009-10, and submitted to the President and Executive Team for review and approval in spring 2010.

Deepening and Advancing Sustainability: The Goals

Goal 1. Expand Sustainability in Academic Affairs

About the Division of Academic Affairs

The Division of Academic Affairs, directed by the Provost, encompasses the university's eight schools and colleges, and offices supporting academic achievement, enrollment, faculty affairs, and global engagement. The division is guided by the importance of faculty collaboration, a commitment to academic excellence, and becoming the preeminent independent university in the Pacific Northwest. The division believes that academic excellence can best be achieved, and the university's core character best demonstrated, through the following broad educational goals:

- Proficiency and excellence in basic life and learning skills
- Depth in an academic discipline, field of study or professional field
- Breadth and integration of deep learning characteristic of a liberal arts and sciences education
- Functional understanding of the integration of one's professional field or academic discipline and its significance
- Strength in one's learning dispositions and core personal values

In 2009, the Academic Strategic Action Plan was developed and approved to carry forward the strategic priority of academic excellence in 2009-2014. With the goals of advancing academic excellence and assuring that all graduate and undergraduate students experience an integrated Jesuit education for leadership, the plan presents the following six interdependent initiatives.

- Curricular Renewal – Graduate Degrees, Undergraduate Majors and University Core
- Comprehensive Faculty Development
- Student Success and Enrollment Management
- Instructional Spaces and Campus Facilities
- Centers, Institutes and Signature Programs
- Strategic Fundraising and Celebrating Success

Current Offerings

Teaching and learning, research and scholarship, and service learning are the core components of the curriculum. In November 2009, a broad, exploratory survey was distributed to the faculty to assess the level of sustainability offered in teaching and learning, and research and scholarship (Appendix B). Respondents answered questions about how much sustainability is included in their teaching, research, and scholarship and how much they anticipate including in the future.

The survey was distributed to 691 faculty members; 107 responded to the survey. Responses reflect 15% of total university faculty and may represent only that faculty most passionate about sustainability. Further investigation is needed to understand the degree to which sustainability is incorporated by all faculty, across all schools and colleges. However, findings do illustrate that sustainability is incorporated into some of the academic offerings throughout the university.

Teaching and Learning

For the current academic year 2009/2010, 79% of respondents address sustainability in their core/required course content. Of these respondents, 67% include environmental issues in their sustainability content. About one-third of these respondents indicate that they have increased the amount of sustainability in their core/required courses over previous years. In **elective** courses offered in the academic year 2009/2010, 87% of respondents who teach electives include sustainability. Environmental issues are included in elective coursework by 72% (41) of these faculty who include sustainability. Of those who include sustainability in electives, 28% included more sustainability in the current academic year (2009/2010) than they included in the 2008/2009 academic year.

These results are reflected in the variety of courses and degree programs that include sustainability. Both undergraduate and graduate education offer specific classroom engagement with sustainability (see Appendix C). A recent inventory of courses identified over 50 undergraduate courses which include sustainability in six of the eight colleges and schools. Undergraduate programs also include three degrees that directly address environmental sustainability:

1. BS in Environmental Science
   The environmental science degree offers a broad background in the basic and applied sciences, with foundation courses in general biology, general and organic chemistry and environmental engineering. This degree links biology and chemistry majors, and most pre-health professional programs.

2. BS in Civil Engineering with Environmental Engineering specialization
   Environmental engineering is the design of systems or approaches to protect, manage and improve the quality of our water, soil, and air through the control of wastes, pollution prevention, and environmental restoration.

3. BA in Environmental Studies with optional Public Policy and Urban Affairs specialization
   Environmental Studies holistically links the natural sciences with the social sciences and humanities through earth, life, human beings, and spirit. Ecology provides the framework for seeing the whole web of natural systems, and for discovering humans' role within them. This major follows a multi-disciplinary approach to understanding environmental crises and developing strategies for their solutions. If paired with a public policy or urban affairs specialization, students are prepared to work in areas related to environmental policy.

At the graduate level, there is not currently a specific degree program focusing on climate change or sustainability. Courses with sustainability themes do exist, however, and are offered in the School of Law, College of Education, and Albers School of Business and Economics, as described below.

- The School of Law: Various aspects of Environmental Law are offered in the School of Law, such as "Environmental, Natural Resource, and Land Use." This course examines national, state, and international issues raised by increasing environmental pollution, problems of unchecked urban sprawl, and the utilization and degradation of natural resources.
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- The College of Education: The Master in Teaching (MIT) program offers an opportunity to focus on environmental education. Students in the teacher certification program work with teachers in a partnership school to develop curriculum and provide instruction centered on an environmental issue. The program helps students to demonstrate planning, instruction and communication that prepares students for an environmentally responsible and globally interconnected society. Perspectives on sustainability and leadership are also offered in the Leadership and Sustainability class in the Executive Leadership Superintendent program, and the Educational Leadership program.

- The Albers School of Business and Economics: Sustainability-related business coursework is growing organically in response to increasing demands from business, student, and faculty interest. Albers School is building a collection of courses to augment existing sustainability curriculum, including "Sustainability Strategies for Business." Sustainability is also a major component of the Executive Leadership Program (ELP) in the Albers School, appearing in the Leading Organizations module. Student team projects have addressed sustainability issues, such as the facilitation of producing ceramic water filters for villages in Africa.

Research and Scholarship

Scholars from across the campus are engaged in research and scholarship addressing issues of sustainability. According to the survey, 40% of faculty respondents are actively researching sustainability issues. Since 2005, 20% of faculty respondents have published sustainability related peer-reviewed and non-peer-reviewed articles and papers, and 30% published peer-reviewed journal articles.

Faculty are investigating a broad array of sustainability challenges. In addition to research related to social and economic justice, researchers and scholars are investigating environmental and climate-related challenges and problems. Faculty are:

- Exploring how carbon particles in the atmosphere from vehicles, power plants, wood burning and wild fires influence climate, to inform climate change prediction models
- Using experimental optics and geophysics to study how atmospheric particles influence optical scattering and the effect of such scattering on global climate change models
- Understanding the impact of anthropogenic chemicals on atmospheric chemistry

- Developing a tool that helps anaerobic digester operators in a way that can lead to more efficient microbiological production of natural gas from waste materials

- Developing methods for synthesizing biologically-important molecules in a way that does not generate hazardous waste and toxic byproducts
- Investigating causes and management of toxic blue-green algae in lakes and the effects of nutrient enrichment on water quality and ecology in the Puget Sound region

Results of the survey also suggest that sustainability-related research may continue into the future. The survey indicates that 49% of faculty plan to research sustainability issues in the future, compared to 40% who currently research sustainability. As faculty research expands, so do opportunities for students to engage with sustainability researchers and the research process.

Service Learning

Service-learning is an integral part of a student's education at Seattle University. The Center for Service and Community Engagement connects students, faculty, staff, and community through sustained partnerships. The purpose is to deepen student learning, create a culture of service, and promote a more just and humane world. The Center's main goals are to form and empower leaders and to foster positive action and improvement within the campus and the wider community.

The Center promotes sustainability in two key ways: by partnering with organizations that value sustainability and through building sustainable relationships. Social justice is advanced through organizations that represent environmental concerns, aging and disabilities, children and youth, health and social services, immigration and cultural issues, literacy, and poverty and homelessness. The Center accomplishes its work through sustained partnerships and promotes long-term, sustained, and positive impact to the community.

Future Goals and Strategies

The Academics sub-committee of the President's Committee for Sustainability wants to be clear that Seattle U addresses sustainability in a broad sense, rather than one limited to environmental issues. Therefore, the Academic Strategic Action Plan goals stated below will be implemented with students learning about the environmental, social, and economic dimensions of sustainability and climate change.

In December 2009, the university adopted the 2009 – 2014 Academic Strategic Plan. The plan calls for developing knowledge of and a commitment to environmental sustainability in both the undergraduate and graduate curriculum. The undergraduate goal is to ensure in part the "breadth and integration of deep learning characteristic of a liberal arts and sciences education, including but not limited to an understanding of….the significance of …a commitment to environmental sustainability." The graduate curriculum goal includes ensuring a "functional understanding of the integration of that [one's chosen] professional field or academic discipline and its significance for…the human stewardship of the environment." To advance sustainability in

academic offerings, research and scholarship, and service learning, the university has identified the following strategies:

Strategy 1.1 Assess and evaluate sustainability in the curriculum

Future programs or degrees focused on sustainability can be richly developed without understanding current curricular offerings. Understanding the type and depth of sustainability offered in each college and school helps drive collaboration on issues and identify where interest and expertise lie. The faculty survey on Sustainability in Curriculum provides initial insight, but a deeper understanding is needed. Measuring student sustainability literacy will also be considered in order to understand the success of learning and teaching.

Timeline: 2011
Responsible: President's Committee for Sustainability
Outcome: Benchmark for sustainability in curriculum and student literacy

Strategy 1.2 Support the Implementation of the 2009-2014 Academic Strategic Action Plan

The Academic Strategic Action Plan was developed to carry forward the strategic priority of academic excellence in 2009-2014. The plan calls for developing knowledge of and a commitment to environmental sustainability in both the undergraduate and graduate curriculum. The President's Committee for Sustainability will support the implementation of plan. Activities to consider include providing resources and support for faculty development; assessing demand for sustainability-related knowledge in the marketplace related to each college and school; and creating an action plan to support increasing sustainability in the curriculum.

Timeline: 2010 - 2014
Responsible: Provost's Office, Colleges and Schools
Outcome: Support Implementation of the Academic Strategic Action Plan

Strategy 1.3 Increase students' engagement with faculty research on sustainability

Connecting students to faculty research provides another opportunity to make students part of the solution to climate change challenges. Possible actions include: assessing the rate of student involvement and desire to be involved with sustainability-related research projects; investigating sustainability-related research taking place in all colleges and schools; and promoting independent studies as outlet for sustainability research.

Timeline: 2011
Responsible: Provost's Office and President's Committee for Sustainability
Outcome: Increased number of student engagements with in sustainability research

Strategy 1.4 Link learning opportunities with university sustainability projects

Deepening a commitment to sustainability requires putting sustainability in to practice. Providing learning opportunities by linking coursework with sustainability initiatives in campus operations or with community organizations provides experiential learning. Students further their education by learning from operations staff and observing how sustainability is integrated into university operations. Evaluating mechanisms to link the learning opportunities with on-campus sustainability projects will be considered.

Timeline:	2010 - 2014
Responsible:	Provost's Office and President's Committee for Sustainability
Outcome:	List and process for connecting learning opportunities to operations

Funding and Tracking Progress

Funding will be provided through normal university budget processes. Progress made towards sustainability-related research goals will be tracked by the Provost's office, Deans, and the President's Committee for Sustainability as follows:

Method	Responsible Group
1. Benchmark and annually evaluate student sustainability literacy level	President's Committee for Sustainability
2. Report on efforts in annual sustainability report	President's Committee for Sustainability

Goal 2. Expand sustainability in co-curricular programs

About Co-Curricular Programs

The goal of co-curricular programming is to provide students opportunities for learning outside the classroom. Co-curricular programs include those overseen by the Director of Student Development, Athletics and Mission and Ministry. These areas work in partnership with other areas of campus, reflecting the idea that students learn both in and outside of the classroom. Co-curricular programming provides resources, services and activities to assist students in developing the competencies, skills and values needed to lead and serve in a diverse and changing world. The programs' approach is holistic in that student growth and development is fostered intellectually, socially, physically and spiritually, and inclusive in that all members of the campus community are encouraged to become actively engaged in the teaching and learning process. Co-curricular programs are guided by the following goals:

1. Establish educational partnerships that integrate academic learning and student development;
2. Co-create a campus culture, climate, and environment that promote a comprehensive, holistic approach to student learning and "puts the good of all students first";
3. Help students to develop a coherent set of values (outlined in the Mission Statement) and ethical standards consistent with our Jesuit/Catholic Mission; and
4. Utilize an ongoing systematic inquiry to enhance the quality of the learning experience.

Current Efforts

Many co-curricular departments (Appendix D) have begun to incorporate themes surrounding sustainability and climate change into their programming. This co-curricular education takes many forms, including student trainings, campus-wide speakers, residence hall programming, and educational campaigns. Highlights of these efforts include:

<u>Student trainings and education</u>

The transition from high-school to college is an opportunity to encourage first-year students to adopt practices and behaviors that will be sustained throughout their college careers and beyond. During the annual Orientation Program, Orientation Advisors (OA's) introduce new students to academic and community expectations and outline what it means to be a member of the campus community. OA's receive sustainability-related training from both the Campus Sustainability Manager and the General Manager of Bon Appétit, the food service vendor on campus. Within these trainings, OA's are educated about the campus's commitments to sustainability, specific practices on campus, and what information they share with new students. Bon Appétit trains OA's in practices essential to adopting low-carbon and local diets, as well as the impact and importance of composting and recycling. Other programs offered to new students include: campus tours highlighting sustainability efforts; small group facilitated discussions; "Urban Invasion," a partnership with Metro Transit that orients students to the bus system and encourages them to use public transportation; and, in the past, "Zero Waste Picnics" to educate students about how to reduce and compost their waste.

Campus-Wide Speakers and Education

Within the past few years, various departments have partnered to invite speakers from a broad range of expertise to provide presentations to our students. Themes speakers have covered include: factors that contribute to global food shortages, how to care for our environment, food choices, carbon footprint and sustainability, climate action, and global communities' struggles with the environmental causes of poor health.

Programs and Events

Programs around multiple aspects of sustainability and environmental action have taken place on campus in recent years. A community garden was started and supported through student engagement and education. Students were also educated about the relationship between local produce, understanding where food comes from, and carbon footprint reduction. An art exhibit entitled "greenSquat" was designed to illustrate ways to reclaim and reuse sets and staging from theatre in a sustainable and productive manner.

Service Projects

For over a decade during Welcome Week, new students have been participating in an annual service project. These projects are designed to help new students connect with the campus and the wider Seattle community while providing meaningful service to the city. For the past three years, the project has focused on environmental restoration. Students, staff, faculty, and alumni spend one day clearing debris and non-native plants in Seattle parks and learning about the local environment. Numerous other student groups regularly engage in environmental or social justice related service work in and around the Seattle area. Additionally, the Outdoor Adventure and Recreation program ensures hands-on learning by offering training to trip leaders and students alike in environmental ethics and Leave No Trace camping principles.

Residence Hall Living Learning Communities

Housing and Residence Life dedicates a floor for students dedicated to Social Justice Living/Learning Community. This community is comprised of a diverse group of first and second year students who share an active interest in exploring issues of justice, including environmental justice. Students are inspired to be responsible global citizens in the pursuit of a more just and environmentally sustainable society. This community brings together faculty, staff, and students around an innovative program that integrates core courses, community-based learning, and residential education.

Educational Outreach

Poster campaigns, bulletin boards and informational signage are used extensively for educational outreach on campus. In addition to outreach provided through events, specific departments engage students with sustainability initiatives. For example, Bon Appétit, the food service provider, hosts a yearly **"**low-carbon diet day" as well as an "eat local day." The main purpose of these events is to educate students about carbon neutral diets and sustainability; to this end, posters and brochures are created and displayed across campus. Bon Appétit's director of food service speaks regularly in classes and to student organizations about food, climate change and how consumer purchasing decisions can impact positive change (http://www.bamco.com/page/26/low-carbon-diet.htm). Housing and Residence Life developed and implemented campaigns to encourage students to take the stairs.

Future Goals and Strategies

Departments that currently offer sustainability-related programs and events intend to continue these programs in the future. To deepen and expand sustainability commitment and opportunities within co-curricular programming, a more comprehensive approach with buy-in and partnerships spanning the entire campus community is needed.

Co-curricular departments are in the process of considering which goals and strategies to adopt and implement in order to expand sustainability within programs. The following are some of the strategies under discussion:

Strategy 2.1 Establish a Co-curricular Programming Subcommittee

A Subcommittee of the President's Committee for Sustainability will be charged with overseeing the development and implementation of co-curricular sustainability initiatives and programs. Steps in this process include appointing a staff member from each department to be the respective sustainability representative, and organizing and setting group goals.

Timeline:	2010
Responsible:	President's Committee for Sustainability
Outcome:	Co-curricular Programs Subcommittee

Strategy 2.2 Develop learning outcomes focused on sustainability

The Co-curricular Programs Subcommittee will identify outcomes and expertise needed to promote and advance sustainability within co-curricular programs. The Subcommittee will reach out to other areas on campus to leverage best practices to develop programs that complement other campus initiatives. Learning outcomes will be developed considering these possible approaches: assessing knowledge in and interest by students and staff, and expertise needed around key sustainability issues; conducting in-service workshops to educate staff on sustainability issues and invite input about how to incorporate sustainability into departments' strategic plan; and developing an action plan that identifies learning outcomes, goals and processes for deepening and expanding educational programming for students.

Timeline:	2010 - 2011
Responsible:	PCS Co-curricular Programs Subcommittee
Outcome:	Learning goals for Co-curricular programs

Strategy 2.3 Develop a comprehensive communications plan

Co-curricular programs comprise many areas that are experienced in communicating their own offerings. By leveraging the learning and experience of each area's own communications plans, the Task Force will make students and campus members aware of sustainability offerings. The Task Force may consider such tactics as adding a tab to the Student Development website that is specifically dedicated to sustainability, and which outlines Student Development's commitment. The plan will be developed in collaboration with co-curricular members, students and Marketing and Communications, who will provide counsel.

Timeline:	2011
Responsible:	PCS Co-curricular Programs Subcommittee
Outcome:	Comprehensive roadmap for extending sustainability offerings

Strategy 2.4 Develop a comprehensive peer education program

A peer-to-peer outreach program seeks to:

1. Educate and motivate all students in a positive and fun way to conserve natural resources, water and energy and use alternative transportation.
2. Develop students' capacity to make decisions that integrate human, environmental and economic needs as a whole system.
3. Develop the student delegates' leadership skills and increase their marketability.

Timeline:	2012
Responsible:	PCS Co-curricular Programs Subcommittee
Outcome:	Three goals described above

Funding and Tracking Progress

The Division of Student Development will fund initial sustainability initiatives. Once the PCS Co-curricular Programs Subcommittee finalizes its action plan, funding needs will be assessed and incorporated into the budget planning process.

Progress made towards co-curricular goals will be tracked within and outside of the departments, and will be monitored by the President's Committee for Sustainability.

Method	Responsible Group
1. Report on efforts in annual sustainability report	President's Committee for Sustainability

Goal 3: Increase Sustainable Practices in University Operations

Summary of Sustainable Practices: Emissions in FY 2009

Carbon equivalent emissions are one way to measure sustainability in operations. In fiscal year 2009, university operations emitted 24,478 metric tons of carbon dioxide equivalents. Operations include all the activities in Table 2 below.

Table 2. Ranking of Activities that Contribute to Emissions (FY 2009)

Rank	Activity	Metric Tons	Percent	Scope	Description
1	Commuting	8129	33%	3	Emissions from cars and transit used by employees and students commuting to campus.
2	Air Travel-Study Abroad	5434	22%	3	Flights taken students in the Education Abroad program.
3	Air Travel-Business	3,983	16%	3	Flights taken by employees on business travel.
4	Energy – Natural Gas	3398	14%	1	
5	Air Travel-Athletics	1,569	6%	3	Flights taken by student athletes and coaches.
6	Energy – Steam	1,392	6%	2	
7	Trash	215	.09%	3	Waste that is not recycled, composted or reused, but buried in a landfill.
8	Energy – Electricity	206	.08%	2	
9	University Vehicles and Equipment	125	0.005%	1	Vehicles used by various departments
10	Other	24	0.009%	1, 3	Refrigerants, fertilizer, loss of electricity from transmission and distribution
Total Emissions		**24,478***	**100%***		*Total may not equal sum due to rounding
Offsets**		(171)			
Net Emissions		24,307			

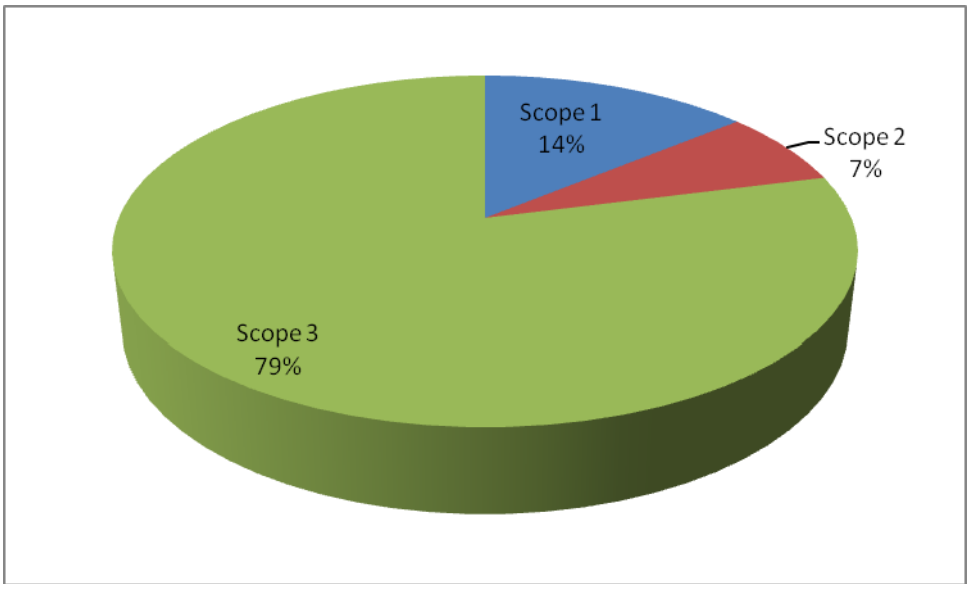
**Offsets are from on-campus composting, carbon offsets for the Admissions & Alumni building and renewable energy credits for investing in wind energy.

Table 2 also categorizes the emissions sources and activities by "scopes." Scopes define an organization's level of ownership and control of emissions sources. "Scopes" are defined as follows:

- Scope 1: sources that are owned or controlled by the institution; these emissions are generated on campus
- Scope 2: sources that are purchased in order to generate energy on campus; these emissions are generated off campus
- Scope 3: all other emissions sources that are not owned or operated by the university, but which occur as a result of the university doing business, such as composting, waste and commuting; emissions may be generated on or off campus

The university's emissions by scope are shown in Graph 1:

Graph 1. Total Greenhouse Gas Emissions by Scope (FY 2009)



Scope 3 emissions from commuting and air travel produced the majority of the university's total emissions. Scope 1 emissions are primarily from the natural gas we buy to heat our buildings. Scope 2 emissions are from the steam and electricity we buy to heat and light our buildings.

Commitment to Reduce Emissions

As a signatory to the American College and University Presidents Climate Commitment (ACUPCC), Seattle University is committed to work towards climate neutrality, or zero net emissions. The initial commitment is to reduce all scope 1, 2 and 3 emissions combined by at least 12% by 2020 and by at least 51% by 2035, shown in Table 3.

Table 3. Target Effect on Emissions due to the Commitment to Increase Sustainability in University Operations

Year	Metric Tons of Carbon	Percent Reduction (based on 2009)
2009	24,478	-
2020	21,540	12%
2035	12,484	51%

Summary of Reduction Strategies

Reduce, Avoid and Replace

Strategies to reduce greenhouse gas emissions are often visible, demonstrating sustainability in practice. These initiatives are an opportunity to build awareness among campus members and the public, and advance the university's role as a leader in sustainability. These initiatives typically focus on reducing and avoiding emissions, and replacing emissions-heavy equipment or processes. The university will continue these approaches by increasing energy conservation and efficiency in building operations; making efficiency improvements in university vehicles and mobile equipment; increasing the use of alternative transportation for commuting; providing alternatives to business air travel; and sending less waste to the landfill.

Carbon Offsets

The strategies described above will significantly reduce the university's carbon emissions, but will not eliminate all emissions. It is unrealistic to eliminate all emissions caused by Scope 1 (on-site natural gas use) and Scope 3 air travel and commuting. To achieve climate neutrality, the university must consider the purchase of high quality carbon offsets. This approach is supported by ACUPCC. Offsets can neutralize the emissions an organization cannot directly reduce through its own initiatives. The university does not anticipate acquiring offsets to achieve climate neutrality until the above strategies have made a significant impact, except possibly for air travel. The university may use offsets on a very limited basis.

Strategy 3.1 Reduce Emissions from Buildings

Current Emissions and Strategies

Energy used to operate the university's buildings (heating, cooling, lighting and operating office appliances and equipment) make up Scope 1 and 2 emissions. In FY 2009, natural gas, steam and electricity produced 21% (4,996 metric tons) of total campus emissions (24,478 metric tons), as shown in Table 4:

Table 4. Energy Used to Operate Buildings as a Share of Total Gross Emissions

Source	Metric Tons	% Of Total Campus Emissions
Energy – Natural Gas	3,398	14%
Energy – Steam	1,392	6%
Energy – Electricity	206	.8%
TOTALS	**4,996**	**21%**

Emissions levels have been relatively low as the result of various conservation projects. In 1986, the university developed an energy conservation program when Seattle Public Utilities began offering financial assistance. Between 1999 and 2009, conservation projects resulted in a reduction in heating and cooling related greenhouse gas emissions[iii]. This reduction occurred despite a 3% increase in building energy use, a 17% increase in square feet and 33% enrollment growth during the same period. The emissions reduction was achieved in part by shifting from steam to natural gas and electricity: steam carries a larger emissions factor than electricity and natural gas. The University also constructed multiple gas boiler plants and expanded hot water loops to improve heating and cooling efficiency. Emissions were further reduced by the efficiency gained from expanding the Energy Management System, a computer-aided tool that optimizes building energy efficiency.

Current Strategies

Today, the university manages emission reductions through key strategies of energy conservation, building efficiency and renewable energy. Examples of these strategies include:

- Lighting: Emissions-heavy bulbs and lamps continue to be replaced with energy efficient alternatives such as T-8 and T-5 tubes for T-12 fluorescent tube lighting, and efficient compact fluorescents in place of incandescent bulbs. Occupancy sensors and improved energy management also contribute to energy conservation. Through these efforts, the university has saved more than 2,600,000 kilowatt-hours of electricity.

- Energy Management System (EMS): A computer-based control system monitors and adjusts heating and cooling in buildings to conserve energy while maintaining comfort. Building systems in all new construction and major remodels are added to the EMS.

- Planned Maintenance: Regularly scheduled maintenance of building systems ensures peak efficiency and allows problems to be fixed before they lead to significant declines in efficiency.

- Retro-Commissioning: The lighting, mechanical equipment and controls systems in existing buildings are evaluated and tested to find opportunities for increased efficiency. This process focuses on optimizing building performance by identifying and implementing efficiency and relatively low-cost operational and maintenance improvements. To date, six buildings have been retro-commissioned.

- Building Design: Since 2006, the university has committed to designing new buildings to a Gold rating under the United States Business Council's Leadership in Energy and Environmental Design (LEED) system. The university achieved LEED Gold on the Admissions and Alumni Building, and anticipates this rating for the Law School Annex, Fitness Center, and McGoldrick Learning Commons.

- Renewable Energy Credits: In 2006, the university became the first and largest institutional customer in Seattle City Light's Green Up program when it committed to purchasing renewable energy. Since then, the institution has purchased renewable energy credits to offset all emissions related to the campus's electricity consumption annually.

Future Goals and Strategies

Reduce 2009 building-related carbon emissions 15% by 2020 and 28% by 2035. Reduce 2009 building energy use 18% by 2035.

Table 5. Target Effect on Emissions due to Building-related Emissions Reduction Strategy

Fiscal Year	% Reduction in Building-related 2009 Emissions	Expected Building-related Emissions after Reduction (metric tons of CO2e)
2009	---	4,996
2020	15%	4,247
2035	28%	3,597

To reduce emissions, the university must invest in projects that improve efficiency of building systems to conserve energy. Facility improvement projects such as upgrades to building exteriors, retro-commissioning, lighting upgrades, plumbing and HVAC improvements can reduce emissions. The university will continue these approaches. Optimal emissions reductions will also depend on behavior and choices made by campus community members. Strategies to reduce emissions include:

Strategy 3.1.1 Improve energy efficiency of buildings

Facilities will continue to retrocommission building systems and replace old equipment and fixtures with newer energy efficient ones.

Timeline: 2010 - 2020
Responsible: Facilities Services
Outcome: Reduced emissions by 2,650 or more metric tons

Strategy 3.1.2 Develop carbon neutral design strategies for major building project

Facilities will evaluate the latest energy and water carbon neutral design strategies, practices and technologies for use in the new science building. The Living Building Challenge certification program provides guidance and resources.

Timeline: 2012
Responsible: Facilities Services
Outcome: Net zero emissions for new buildings

Strategy 3.1.3 Explore renewable energy sources

In November 2009, the university partnered with McKinstry, to identify sustainable strategies for a climate-neutral campus. At that time, renewable energies were determined to be a strategy better suited for the mid-long term, when renewable technology is expected to improve and its associated costs decline. The university will evaluate renewable energy strategies in partnership with community experts after implementing facilities improvement measures.

Timeline: 2015 - 2020
Responsible: Facilities Services
Outcome: Increased use of renewable energy

Funding and Tracking Progress

Building efficiency and conservation projects will be funded through the planned maintenance budget and capital project funding. Funding will also be supplemented by grants and energy rebates. Among possible grants is Puget Sound Energy's Resource Conservation Manager Program. Rebates may continue to be provided by Seattle City Light. Grant and rebate opportunities will be investigated annually as part of the budget planning process.

Progress in energy conservation and building use savings will be tracked and compared to goals, and monitored by the President's Committee for Sustainability. Energy conservation data will be tracked in the following ways:

Method	Responsible Group
1. Review utility bills	Facilities Services
2. Evaluate energy management system	Facilities Services
3. Building design contracts	Facilities Services
4. Annual Sustainability Report	President's Committee for Sustainability

Strategy 3.2 Improve Efficiency of Campus Vehicles and Equipment

Current Emissions and Strategies

University vehicles and mobile equipment contribute to Scope 1 emissions. In FY 2009, total emissions from operating vehicles and equipment equaled 125 metric tons of carbon, or 0.01% of total campus emissions. These emissions are due to the fuel type, vehicle type and use habits, which all affect efficiency.

Until 2001, all university vehicles and equipment had been powered by fossil fuels. Beginning in 2001, the university began purchasing electric and hybrid vehicles, which generally produce fewer emissions than fossil fuel alone. Today, 14 electric and 4 hybrid vehicles are in Seattle University's fleet. Bikes were also purchased to replace two vehicles used by Public Safety for patrolling campus. (The electric vehicles are included in the electricity total discussed in the section above, "Efficient Building Operations." The amount of emissions from electric vehicles is considered too small for direct discussion.) Diesel and gasoline power the remaining trucks, vans, flatbeds and dump trucks, executive and staff cars. Propane and diesel power equipment such as forklifts, generators and bobcats. (Biodiesel, although used in the past, is no longer used due to bad batches that damaged some equipment and vehicles.)

Currently, decisions about vehicle type and use are made by department. Strategies departments use to manage emissions include limiting the number of executive and staff vehicles; replacing vehicles with more efficient models when leases expire; optimizing trips and loads; and undertaking routine and planned maintenance. These strategies, if optimized, help ensure vehicles and equipment is running efficiently so emissions are minimized.

Future Goals and Strategies

The future goal for vehicle and equipment emissions is a 3% per year reduction to 2020, or a total of 30%. If achieved, 35 metric tons will be reduced by 2020, leaving 71 metric tons produced, outlined in Table 7:

Table 7. Target Effect on Emissions due to Campus Vehicle and Equipment Emissions Reduction Strategy

Fiscal Year	% Reduction in Vehicle & Equipment 2009 Emissions	Expected Vehicle & Equipment Emissions after Reduction (metric tons of CO2e)
2009	---	125
2015	18%	22.5
2020-2035	33%	41

The reduction of 3% per year will largely depend on replacement and use strategies. Greater emissions reductions will depend on longer-term solutions. For example, as alternative fuel technology improves and becomes more affordable, and design improves vehicle and equipment efficiency, emissions will likely further decline. Until alternative fuels and design improves, the following strategies will be considered:

Strategy 3.2.1 Maintain or Increase Efficiency of Existing Vehicles and Equipment

Existing vehicles and equipment are owned and managed by individual departments. Multiple "owners" may lead to different levels of attention to vehicle maintenance. The university can promote efficient use and maintenance in the short term through campus-wide communications. Facilities Services will work with the Vice President for Finance, the Business Affairs Office, and individual departments and vehicle owners to understand current use patterns and maintenance practices, and promote efficient use. The university will consider such efficiency improvement measures as reviewing routine maintenance schedules and adjusting scheduling as necessary and developing maintenance reminders and communications.

Timeline: 2010 - 2011
Responsible : Facilities Services
Outcome: Optimize vehicle/equipment function and use

Strategy 3.2.2: Develop university-wide vehicle and equipment policy

Currently, there is no university-wide policy regarding vehicle use, lifecycle use, efficiency requirements, cost, or branding. These factors are managed on a department basis; practices are not consistent. To ensure that the university's sustainability values and goals are represented in its vehicles and equipment, a consistent and clear approach to managing and maintaining the fleet will be considered. A new policy would include efficiency-related long-term planning decisions around replacement strategies, such as leasing versus purchasing and vehicle types (hybrid, electric, or alternative fuel). A university-wide policy requires collaboration and approval at the Executive Team level. Considerations for this policy include evaluating use patterns to identify alternative modes to cars or trucks and designating or hiring a Campus Vehicle and Equipment Coordinator**.**

Timeline: 2011 - 2012
Responsible: Facilities Services
Outcome: Campus-wide policy for vehicle and equipment purchases, maintenance and disposal

Funding and Tracking Progress

Individual departments will continue to fund their respective vehicles and equipment. As vehicles are upgraded, departments will investigate rebate and discount opportunities available for new high-efficiency vehicles and alternative fuel vehicles.

Fleet usage and vehicle type will also continue to be the responsibility of department owners, until the coordination and management of the fleet changes.

Method	Responsible Group
1. Log gallons of fuel used monthly	Departments
2. Track number of leased and owned vehicles annually	Departments
3. Annual Sustainability Report	President's Committee for Sustainability

Strategy 3.3 Provide alternatives to Air Travel

Current Emissions and Strategies

Air travel contributes to Scope 3 emissions and accounted for 10,986 metric tons, or 45%, of the university's total carbon footprint in FY 2009. In total, campus members traveled an estimated 14,149,475 air miles in FY 2009. The emissions are generated from business travel,[iv] transportation by athletic teams and students participating in the Education Abroad programs[v]. Business miles traveled are due to conferences, meetings and recruiting events. The university has 11 athletic teams that travel mostly throughout the western United States and occasionally to other parts of the country. The Education Abroad program serves more than 500 students studying in 45 countries each year while earning credit toward their degrees. In FY 2009, Education Abroad contributed the most air miles of the three sources, illustrated in Table 8:

Table 8. Type of Air Travel as a Share of Total Emissions

SOURCE	ROUND TRIP MILES TRAVELED	EMISSIONS (IN METRIC TONS)	% OF TOTAL CAMPUS EMISSIONS (24,478)
Study Abroad	6,999,146	5434	22%
Business Travel	5,129,882	3,983	16%
Athletics Travel	2,020,447	1,569	6%
TOTALS	14,149,475	10,986	45%*

*Total may not equal sum due to rounding

Future Goals and Strategies

The university is committed to addressing the emissions generated by air travel, but faces a challenge. Two of the institutional priorities outlined in *Strategic Directions 2008-2013* may require additional air travel. These priorities – increased global engagement and the transition to NCAA Division I Athletics – require travel throughout the United States and around the world. Employees will take more trips related to promoting the university's Education Abroad program, recruiting international students, and increasing partnerships with global educational organizations. As a result of these efforts, foreign travel for employees on outreach missions and students studying abroad will increase. The university's priority for a successful NCAA Division I athletic program includes increasing the number of athletic teams that participate in Division I athletics. Athletics-related air travel may therefore increase.

Considering the strategic priorities, the university's efforts to reduce air travel emissions will focus on reducing business-related and athletics air travel and evaluating high quality carbon offsets to offset travel related to Education Abroad programs.

Strategy 3.3.1 Reduce Air Miles Traveled for Business and Athletics Purposes *

** Does not include study abroad air travel.*

The university is committed to reducing business air travel miles by 10% by 2025 and 20% by 2035 (a total 1.03 million miles, respectively), outlined in Table 9.

Table 9. Target Effect on Emissions due to Business Air Miles Reduction Strategy

Fiscal Year	% Reduction in Air Miles Traveled based on 2009	Expected Air Miles Traveled after Reduction (in millions)
2009	---	5.14
2015	3%	4.99
2020	8%	4.73
2025	10%	4.63
2030	17%	4.27
2035	20%	4.11

Facilities Services staff will collaborate with Human Resources, Office of Information Technology and other campus areas to identify opportunities for alternative modes of transportation or business solutions that produce fewer emissions than air travel. Possible approaches include developing technology solutions for videoconferencing.

Timeline: 2012
Responsible: Facilities Services
Outcome: Campus-wide plan for alternatives to business and athletics air travel

Strategy 3.3.2 Evaluate high-quality certified carbon offsets

The university will thoroughly evaluate and assess the merits of buying high quality offsets to address emissions from air travel. Carbon offsets are available from a number of sources. Carbon offset standards and oversight is not yet well-established; offsets must be considered carefully. The university will study the issue, gather input from the campus community, and exercise due diligence before committing to offsets purchases.

Timeline: 2012
Responsible: Presidents Committee for Sustainability
Outcome: Recommendation of alternatives for use of offsets

Funding and Tracking Progress

Funding for alternatives to business will be provided from existing budgets or through annual budget requests. There is no funding needed to evaluate offsets. Progress toward reducing air miles traveled will be measured by:

Method	Responsible Group
1. Calculate air miles traveled monthly	Facilities Services
2. Develop alternatives to business travel	Facilities Services, Office of Information Technology, Human Resources
3. Evaluate use of offsets	President's Committee for Sustainability
4. Annual Sustainability Report	President's Committee for Sustainability

Strategy 3.4 Increase Alternative Transportation Mode Incentives and Programs for Commuters to Campus

Current Emissions and Strategies

Students and employees commuting to campus is the second largest source of emissions at the university. Commute trips account for 33% (8,129 metric tons) of the university's total carbon footprint. Clean Air-Cool Planet, the emissions calculator the university utilizes, tracks emissions from single-occupancy vehicles (SOV), car and van pools (HOV), bus, light rail and commuter rail. Campus members also travel in other ways, such as walking and biking. Share of miles by mode for all campus members are outlined in Table 10.

Table 10. Share of Miles by Commute Trip Mode

Commute Trip Mode	Miles Traveled	Percent Of Total Miles Traveled
Automobile (SOV + HOV)	15,459,762	53%
Bus	7,239,756	25%
Walking	3,751,555	13%
Commuter Rail	2,093,691	7%
Bicycling	881,627	3%
TOTALS	**29,426,391**	**100%***

Note: Light Rail and Ferry not tracked
*Total may not equal sum due to rounding.

The university is guided by two requirements: The Transportation Management Plan (TMP) and Commute Trip Reduction (CTR). Seattle University has had an effective Transportation Management Program (TMP) for almost twenty years as a result of Washington State law. This requirement focuses on reducing traffic and parking impacts on surrounding neighborhoods.
In 1991, the Washington State Legislature passed the Commute Trip Reduction Law. This law was designed to foster public and private partnerships that would encourage commuters to switch from driving alone to alternative commute modes. The Law requires employers with 100 or more full-time employees to provide a transportation program to encourage employees to use alternative commute modes. The university is also required to practice Transportation Management Programming.

The 1997 Institutional Master Plan adopted aggressive goals to reduce the number of employees and students choosing to drive alone to campus. Progress towards these goals was measured in 1995, 2001, and 2007 using electronic surveys of the campus population. Between 1995 and 2007, the percentage of employees and students driving alone to campus dropped from 53% to 39% even though campus population grew by 2,745, illustrated in Table 11:

Table 11. Percentage of Campus Population that Drives Single Occupancy Vehicles

Year	Campus Population	SOV Population	Percent SOV
1995	6,105	3,269	53%
2001	6,803	2,850	42%
2007	8,850	3,416	39%

Source: 2009 Transportation Management Plan, prepared by Transportation Solutions, Inc.

Commute Trip Reduction Program and Transportation Management Plan

In 2006 and in 2010, the university received a Diamond Award for Commute Trip Reduction in the Commuter Challenge. This award recognizes the university's success, commitment, and leadership in motivating employees and students to take alternative transportation. The university's current commute trip reduction program and transportation management plan is designed to provide alternative transportation choices to help reduce the rate at which students and employees drive alone to campus. The program includes the following elements to promote alternative transportation choices:

- Subsidized Transit Passes: The University provides subsidized bus passes for employees and students that include bus and train travel across three counties. Pass holders receive parking for up to five days of parking each month and a ride home should an emergency arise during the day. The university also provides a subsidy for employees to utilize the state ferry system as a "walk on." Daily use bus passes are available for student use.

- Vanpools: Vanpools are available for a group of employees and students to commute together. The university waives the on-campus parking fee for vans parked on campus.

- Bus Service: In 2008 the university, in partnership with other local institutions, successfully advocated for the creation of a new bus route that links the campus to light rail and bus station hubs.

- Car Sharing: The university partners with Zip car, a car-sharing company which rents cars by the hour, to provide a hybrid Honda sedan on campus. The university subsidizes part of the cost for employees to use the car for work or personal errands.

- Carpools: Employees and students who enroll in a carpool pay only 25% of the cost of a SOV parking permit and enjoy premium parking spaces. The parking permit fee is waived for carpools of four or more. The university owns five 12-passenger vans for student groups, departments, and employees to use for group outings.

- Awareness and Outreach: Transit schedules and other transportation information can be obtained from multiple locations on campus including the residence halls. The university website also provides information about transportation alternatives. A staff person from Public Safety informs new staff about university subsidized transportation resources.

- Walking and Biking: Employees and students who are registered walkers and bicyclists receive a complimentary parking card for five days of parking each month when they need their car. Bicyclists have access to lockers, showers, covered parking and free bike lock checkout.

- Nighthawk Safety Escort/Patrol: Public Safety provides a safe evening shuttle for students and employees who live near campus or for employees to connect to transit stops that may be difficult to reach in the evening. The university utilizes two hybrid vehicles for this service.

Future Goals and Strategies

Reducing commute trip emissions requires a shift from SOV trips to lower or no-emissions alternatives. The university's goal is that no more than 29% of the daytime campus population (students and employees) should arrive to campus by driving alone by 2035. Interim goals are outlined in Table 12.

Table 12. Target Effect on SOV Rate due to Reduction Strategies targeting SOV Drivers

Fiscal Year	Percent of Population Utilizing SOVs
2009	43%
2015	35%
2020	35%
2025	32%
2030	30%
2035	29%

Reducing the percent of the campus community driving alone to class and work depends on access to and support for alternative modes of transportation, and personal decision to use the alternative modes. Access to alternative choices is dictated by the regional transit system. The regional transit system serving the university is complex; it involves multiple cities and counties, the state, and several transit agencies. The ability of the university to make a unique, direct, and immediate impact on the system itself is limited. The university must work with the transportation agencies and partner institutions to address transportation policy issues on a regional basis.

Success also depends on employees' and students' decision to choose alternative modes of transportation. To achieve its goals, the university will work to influence this decision. The university will aggressively communicate, support, and promote alternatives; increase participation in current transportation programs; offer new choices or programs; and increase on-campus housing options.

Specifically, the university is committed to strategies below to reduce its SOV user rate to decrease emissions from commute transportation.

Strategy 3.4.1 Support and advocate for development of new and existing public transit

The regional transportation agencies are planning the expansion of the regional light rail system and for the development of a neighborhood streetcar. Both improvements will significantly increase public transportation options for the campus. The university will monitor and be a strong advocate for these alternatives. The university will also pursue opportunities to improve bus routes serving the campus. Public Safety and Facilities Services will engage with local, regional, and state agencies and community partners to support and provide leadership to enhance the public transportation options.

Timeline: 2010 – 2035
Responsible: Public Safety, Facilities Services
Outcome: Increased public transportation options

Strategy 3.4.2 Implement the 2009 Transportation Master Plan

The existing 1997 Transportation Master Plan (TMP) has been extremely effective reducing the SOV rate and can be even more aggressive with some modifications and increased participation. An updated TMP was drafted in 2009 to strengthen the university's efforts; it identified new future strategies. The new TMP proposes that the SOV rate be reduced to 35% from the current 39% over the next few years. The new TMP calls for the creation of a "Redhawk Regional Transit Pass" that would be programmed onto the regional transit card ("ORCA card"). The university will also evaluate the possibility of developing shuttle service to connect the campus to popular destinations such as downtown Seattle, the downtown transit tunnel, light rail service, the Sounder commuter train and area shopping centers. Reserved parking for electric plug-in vehicles will be created.

Timeline: 2010 through 2015
Responsible: Public Safety, Facilities Services
Outcome: Reduced emissions, use and miles related to SOV commute trips

Strategy 3.4.3 Increase awareness, outreach and support of alternative transportation

Individuals must make the choice to change commute behavior from SOV to alternative commute modes such as transit, HOV, bicycle and walking. Providing awareness, guidance, and support makes the change easier. This strategy will require Facilities Services, Public Safety, Human Resources and Student Development support. Additional support will be provided by Marketing and Communications, which will help ensure a web presence for different awareness and outreach initiatives. The opportunities include developing a comprehensive web presence, creating a Transportation Buddy Program and developing a One-on-one Consultation Host Transportation Open House.

Timeline: 2010 through 2015
Responsible: Public Safety
Outcome: Increased awareness and involvement in programs

Strategy 3.4.4 Reduce the need for employees to commute to the campus

Offering adjusted schedules and telecommuting for employees reduces the amount of commuting to campus. The university will evaluate existing policy to determine if the use of alternative schedules can be expanded. The review will be led by Human Resources. The Office of Information Technology will assess technology options that support alternative schedules.

Timeline: 2012
Responsible: Human Resources
Outcome: Reduced commute miles traveled

Strategy 3.4.5 Increase percentage of students living on campus

Allowing a greater percentage of students to live on campus will reduce emissions created by commuting. The 2009 Campus Housing Master Plan and the 2010 Academic Strategic Action Plan call for increasing the percentage of students living on campus to 60% and 65%, respectively, reducing the commute trips made to campus each day. The 2006 Facilities Master Plan identifies the construction of residence halls over the next several years that would allow the university to achieve these rates.

Timeline: Ongoing
Responsible: Facilities Services
Outcome: Reduced number of students that commute by motorized vehicles

Strategy 3.4.6 Promote opportunities for students and employees to live near campus

The university's neighborhood offers many residential options including house rentals, apartment buildings, single family homes and condominiums, all within a comfortable walking, biking and public transit distance. To encourage campus members to live near campus, the university will investigate the rate of campus members who live in the university's neighborhood and will identify opportunities to partner with neighborhood property developers and develop a Local Area Housing Program. This program would provide support for employees who want to rent or own a home near the campus. Such a program may provide a link between campus members who seek to rent with public, private, and nonprofit housing providers, and programming for encouraging home ownership in the university's neighborhood.

Timeline: 2011 and ongoing
Responsible: To be determined

Outcome: Reduced commuting and promotions for livable, walkable communities

Strategy 3.4.7 Increase use of bicycles as an alternative to vehicles

The university is committed to creating a "bicycle culture" on the campus. Bicycle use is the ideal alternative to vehicle transportation and fills the gaps of public transportation. In the 2007 transportation survey conducted by the Department of Public Safety, 20% of employees and students who drive alone said they would be very or somewhat likely to commute by bike if there was secure covered parking for bicycles. In a survey conducted in spring 2009, 140 students (17% of those surveyed) indicated that they would use a bike locker more than three days a week. The university partnered with Cascade Bicycle Club who examined challenges and opportunities impacting increased bicycle use by the campus community. Cascade made several recommendations including increased bicycle parking, developing a bike share program, improving bicycle gateways, reviewing existing and future opportunities for bicycling incentives, and continuing and expand participation in Cascade Bicycle Club's May Bike Month Promotion. Public Safety, Facilities Services, Human Resources, and Student Development will collaborate to implement these actions.

Timeline: 2011 - 2015
Responsible: Public Safety
Outcome: Reduced emissions due to motorized commute modes

Funding and Tracking Progress

Funding for commute trip reduction will come from capital projects and annual budget requests. Grants and sponsorships with partner organizations will be investigated annually as a source of funding. The success of reducing commute trip emissions will be tracked utilizing several methods including the following:

	Method	Responsible Group
1.	Number and types of parking passes issued annually	Public Safety
2.	Number and types of transit passes issued annually	Public Safety
3.	Quarterly Bicycle Count	Public Safety
4.	Annual Commute Trip Reduction Surveys	Public Safety
5.	Annual Transportation Surveys	Public Safety
6.	Collection of ORCA pass data	Public Safety
7.	Annual Sustainability Report	President's Committee for Sustainability

Strategy 3.5 Send Less Waste to the Landfill

Current Emissions and Strategies

In FY 2009, the university generated approximately 1375 tons of solid waste. Table 13 illustrates the quantity of each material and how it was disposed. Of the total waste generated, 51% was sent to the landfill and 49% was composted, recycled or reused.

Only waste sent to the landfill is counted toward our green house gas emissions. Landfilled waste created 215 metric tons of carbon dioxide, less than 1% of the university's total carbon footprint as part of Scope 3 emissions.

Table 13: Share of Total Waste Generated by Material and Disposal Method

WASTE DISPOSAL MODE	TOTAL (SHORT TONS)
Landfilled	705
Recycled – Commingled	413
Recycled – Paper	173
Compost – Pre And Post Consumer	48
Recycled – Electronics	20.5
Recycled – Scrap Metal	10
Reuse – Clothing	3.7
Reuse – Goodwill Donations	1.6
Reuse – Food Donation	.4
Total Solid Waste	**1375.5**
Total Compost + Recycle + Reuse	**670.8**
Recycle-Diversion Rate	**49%**
Landfilled Waste Rate	**51%**

Since 1988, the university has operated a dedicated waste reduction and recycling program which prevents and diverts waste from the landfill. In 1992, the university food service switched from an "all-you-can-eat" service to a "pay-per-item" system, resulting in decreased food waste. These programs and practices expanded over time to become today's waste management program. The program includes three key waste diversion categories: recycling and reuse, composting, and waste prevention. The program has received several awards including: six awards from the U.S. EPA Waste Wise program; three Recycler of the Year awards from the Washington State Recycling Association; and an Outstanding Achievement in Organics Recycling award from the Washington Organics Recycling Coalition.

Recycling and Reuse

Recyclable paper, cardboard, glass, metal, and plastic are collected inside and outside of all campus buildings. The university recently switched from separate collection to commingled collection. This switch has made recycling easier for the campus community and will increase participation. After collection, recyclable material is compacted, which reduces the number of trips required to transport the material from campus. Batteries, compact disks, electronics, toner cartridges, and packing material are also recycled. Computers are recycled through the Office of Information Technology, and cell phones, furniture, clothing, and many other items are donated to local nonprofit organizations.

Composting

The university began collecting pre-consumer kitchen scraps and coffee grounds for compost in 1995. In 2003, the university built an on-campus composting facility reducing the weight of material moved off campus. In 2008, the university began collecting post-consumer food waste for composting, which is now collected in several locations across campus, in addition to the main food service locations.

Waste Prevention

Various tactics to reduce waste are used on campus. Reusable mugs are provided to new employees. In 2008, the 'got mug?' campaign was created to increase reusable mug use. In 2009, students began sharing the cost of their printing with the university in order to reduce paper consumption. Facilities Services is currently installing water fountains with "bottle filler" faucets around campus that allow reusable water bottles to be easily refilled. This will cause a decrease in use of disposable water bottles. In cafes, the university's food service provider, Bon Appétit, provides durable, reusable service ware.

Future Goals and Strategies

Although landfilled waste is one of the smallest sources of campus emissions, it is a tangible and visible example of how the university is pursuing climate neutrality. Reducing solid waste mitigates emissions, improves the campus environment, and highlights sustainability efforts to the larger community. The university will continue to strengthen the work that began more than 20 years ago.

The university is committed to reducing carbon dioxide from waste sent to the landfill from 215 tons in FY09 to 34 tons in 2035 as shown in Table 14. The metric tons of carbon dioxide are based on the assumption that fifty percent of the landfill's methane is flared and fifty percent is converted to electricity. Of the total waste generated, the goal is to reduce the amount sent to the landfill from 51% in FY09 to 20% in FY2035 as shown in Table 14.

Table 14: Target Percent of Total Waste Stream Sent to the Landfill due to Reduction Strategies

Fiscal Year	Maximum Percent to Landfill	Tons of Waste	Metric Tons of CO2
2009	51%	705	215
2015	45%	317	76
2020	35%	247	59
2025	30%	211.5	51
2030	25%	176	42
2035	20%	141	34

To achieve these waste diversion goals, the university plans to enact the following waste management strategies and actions.

Strategy 3.5.1 Increase outreach & education about recycling and composting

The university will increase outreach and education about recycling and composting. Potential methods include increasing the availability and visibility of recycling and composting information, developing a recycling and composting newsletter, training student Residence Hall Advisors (RAs) on recycling and composting procedures, and increasing orientation for new employees.

Timeline: 2011 and ongoing
Responsible: Facilities Services
Outcome: Increased knowledge and awareness of recycling and composting

Strategy 3.5.2 Prevent Waste

Preventing waste will require a significant collaboration among many campus stakeholders. Possible actions the university will consider implementing include reducing bottled water consumption, evaluating replacement of paper towel dispensers with energy efficient hand dryers, promoting in-café dining and durable service ware in cafes, and establishing paperless workflow standards.

Timeline: 2010 and ongoing
Responsible: Facilities Services
Outcome: Reduction in generation of solid waste by preventing waste

Strategy 3.5.3 Increase Waste Diversion Rate

The university will expand its waste diversion successes to increase the amount of recycling, composting, and donations collected. Existing recycling containers will be replaced and additional containers will be installed. The compost collection program will be expanded to all facilities, and additional donation and reuse collection will be evaluated.

Timeline: 2012
Responsible: Facilities Services
Outcome: Increased rate of recycling and composting

Funding and Tracking Progress

Waste reduction and diversion strategies will continue to be funded from Facilities Services' operating budget through annual budget requests. Successes will be tracked using several methods include:

Method	Responsible Department
1. Annual waste audits	Facilities Services
2. Calculate waste diversion rate	Facilities Services
3. Surveys and polls to assess awareness	Facilities Services
4. Report in Annual Sustainability Report	Facilities Services

Strategy 3.6 Evaluate High Quality Carbon Offsets

In order to achieve climate neutrality, the university must reduce its emissions to zero. The university is committed to first reducing its greenhouse gas emissions through energy conservation and other reduction and avoidance initiatives. These strategies are described in goals 4.1 – 4.5 above. However, these initiatives alone will not eliminate emissions. Offsets provide a mechanism to eliminate remaining emissions after all other means have been pursued; they complement and do not replace emissions reduction strategies.

Current Strategies

Although Seattle University purchases Renewable Energy Credits through its utility provider, Seattle City Light, it does not yet purchase offsets. The university will begin investigating offsets through Strategy 4.6 below.

Future Goal and Strategies

Strategy 3.6 Evaluate high-quality certified carbon offsets

The university will thoroughly evaluate and assess the merits of offsets with other strategies in the future. Carbon offsets are available from a number of sources. Some providers specialize in offsetting emissions for specific sources of emissions, such as Terrapass for air travel. Others providers offer offsets that can be applied to multiple emissions sources. Carbon offset standards and oversight is not yet well-established; offsets must be considered carefully. The university will study the issue, gather input from the campus community, and exercise due diligence before committing to offsets purchases. The use of Terrapass offsets is likely to be considered much sooner than general offsets.

Timeline:	Future
Responsible:	Presidents Committee for Sustainability
Outcome:	Recommendation of alternatives for use of offsets

Funding and Tracking Progress

No funding is necessary to complete the evaluation, but funds will be needed to acquire offsets. Funding sources will be determined during the evaluation phase. The strategies and actions described above will be tracked as follows. Should offsets purchases be adopted, tracking mechanisms will need to be developed.

Method	Responsible Group
1. Evaluate use of offsets	President's Committee for Sustainability
2. Report in Annual Sustainability Report	Facilities Services

Goal 4: Share Knowledge with Others

Current Strategies

Sharing the university's commitments, actions, and progress is an essential component of the university's effort to achieve climate neutrality. Today, the university provides information to campus members and the public through the university website and occasional newsletters and articles. A variety of one-time, sustainability-related conferences and workshops are also held on campus, including tours of campus facilities and features. Seattle University staff and employees are also frequently asked to speak at off-campus workshops and conferences.

Future Goals and Strategies

The university needs to develop robust and interactive methods to engage others and share information about sustainability and climate change issues. Sharing information holds the university accountable for its commitments and can support sustainable behavior changes in individuals. The university will bolster and formalize its approach to communicating about climate change with the strategies described below. Encouraging campus and community members to become involved with sustainability is also a focus. The university must also expand existing and new partnerships, and collaborate with local agencies and private entities, to support the implementation of the strategies outlined in this plan.

Strategy 4.1 Develop a university-wide sustainability communications plan

A communication plan will be created to advance sustainability related communication. The plan will consider a mix of approaches including developing a more comprehensive and interactive web presence, newsletters, press releases, conference presentations, signage, supporting student clubs, campus tours, speaker series and participation in community events. Regular communications will provide stakeholders current information and updates on progress, new projects and successes in sustainability. Branding and messaging development, and communications planning, will begin with identifying expectations and responsibilities for generating articles, content and producing reports. Planning will involve Marketing and Communications, Facilities Services, operations departments and students. A sample plan is available in Appendix F, which may guide the creation of the university's official plan.

Timeline:	2011
Responsible:	Facilities Services, Marketing and Communications
Outcome:	Increased awareness of sustainability issues and initiatives

Strategy 4.2 Increase opportunities for individuals to engage sustainability

Encouraging campus and community members to become involved with the university's efforts can increase interest in participating in the university's effort, and creates dialogue, which in turn can increase passion for sustainability. The first step is to inventory and evaluate existing opportunities and develop plans for greater participation. This effort could include creating sustainability committees in each department or facility, or working with students on sustainability projects. This effort will be led by the Campus Sustainability Manager in collaboration with the President's Commission on Sustainability.

Timeline:	2010 – 2012
Responsible:	Facility Services and President's Commission on Sustainability
Outcome:	Increased passion, collaboration, and communication

Strategy 4.3 Increase the university's network of partners

In order for the university to reach its potential in addressing climate change, it must increase its partnerships and networks. The university currently collaborates with local agencies on environmental issues, such as transportation planning and energy conservation, and with private entities, such as McKinstry. Robust networks not only increase opportunities for Seattle University to provide sustainability leadership, but also for leveraging resources for project assistance, service learning and research. The university will assess its existing network of sustainability partners to identify new partners or opportunities to strengthen its effort.

Timeline:	2011 and ongoing
Responsible:	Facility Services and President's Commission on Sustainability
Outcome:	Increased collaboration and partnerships

Funding and Tracking Progress

Any needed funding will be included in department's budget request. These strategies will be tracked primarily by the President's Committee for Sustainability.

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APPENDICES

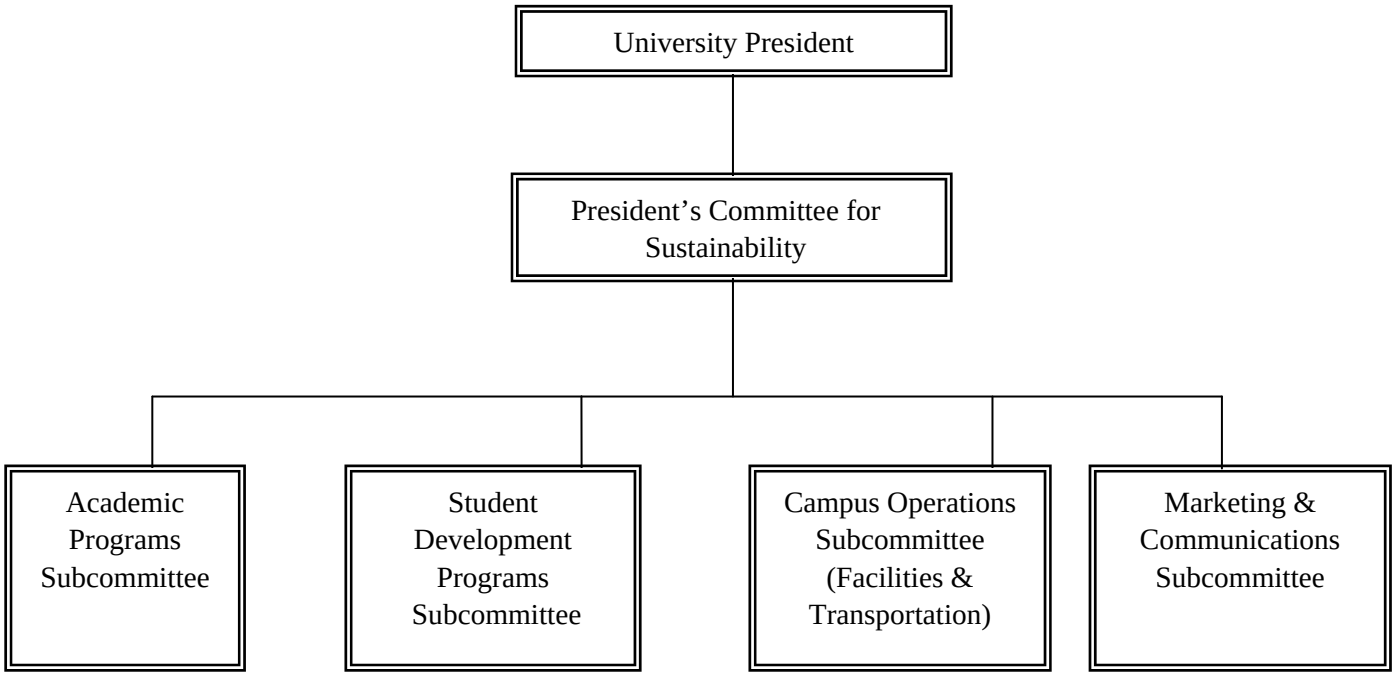
Appendix A: President's Committee for Sustainability

Membership

A. One (1) Administrator from Provost's Office
B. One (1) Administrator from Student Development
C. One (1) Administrator from the Business and Finance Office
D. One (1) Member of the Jesuit Community
E. One (1) Staff from Office of Mission and Ministry
F. One (1) Staff from University Advancement
G. Eight (8) Faculty member(s) representing different schools/colleges and including a member of University Core Curriculum
H. Four (4) at large staff member including one staff responsible for either Transportation, Facilities Operations or Marketing and Communications
I. Three (3) undergraduate students
J. Three (3) graduate students

The Committee shall also provide opportunities for campus and community members, such as Bon Appétit, SunGard, trustees, regents, alumni, neighbor and others to contribute to the advancement of sustainability at the university.

Structure



Appendix B: Sustainability in Curriculum Fall 2009 Survey

What is Sustainability

Sustainability can be defined as ''a framework for making decisions that integrates human, environmental, and economic needs as a whole system.''

Curriculum

1. What type of classes do you primarily teach?
   Undergraduate
   Graduate
   Undergraduate and graduate equally

Considering the core/required classes (we'll ask about elective courses later) you will teach:

2. On average, what percentage of your core/required course content will address sustainability?
   0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, I don't teach core/required classes this academic year.

   If answers "10%" or more, jump to #4.
   If answers "0%", jump to#5.

3. Which of the following sustainability areas do/will you include in your **core/required** course content? (Check all that apply)
   Environment
   Social Justice
   Economic Development

   Continue to #5.

4. Is the amount of sustainability content in this year's **core/required** coursework more than what you included last academic year (2008/2009)?
   Yes
   No

5. Do you plan to incorporate more sustainability content into your **core/required** coursework in the next academic year (2010/2011)?
   Yes
   No
   Not sure

Considering the **elective** classes you will teach:

6. On average, what percentage of your total class content will address sustainability?
   0% 10% 20%
   30% 40% 50%
   60% 70% 80% 90%
   100%

   If answers "10%" or more, jump to #8.
   If answers "0%", jump to#9.

7. Which of the following sustainability areas do/will you include in your **elective** course content? (Check all that apply)
   Environment
   Social Justice
   Economic Development

   Continue to #9.

8. Is the amount of sustainability content in this year's **elective** coursework more than what you

included last academic year (2008/2009)?
Yes
No

9. Do you plan to incorporate more sustainability content into your **elective** coursework in the next academic year (2010/2011)?
Yes
No
Not sure

Research and Scholarship

10. Are you actively researching sustainability issues?
Yes
No

11. Do you plan to research sustainability issues in the future?
Yes
No
Not sure

12. How many sustainability-related scholarly items have you published since 2005?
a. Peer-reviewed journal articles
0, 1-2, 3-4, 5 or more
b. Peer-reviewed proceedings
0, 1-2, 3-4, 5 or more
c. Non-peer-reviewed items
0, 1-2, 3-4, 5 or more

Other Questions

All respondents answer the following series of questions.

13. In what school or college do you primarily teach?
Arts & Sciences
Albers School of Business and Economics
Education
Law
Matteo Ricci
Nursing
Science and Engineering
Theology and Ministry

14. Is your position tenure-track or adjunct?
Tenure-track
Full-time adjunct/lecturer
Adjunct

15. Do you think the university should formalize its approach (eg, committee or office) to sustainability?
Yes
No

444 Please share any additional comments or suggestions:

Appendix C: Inventory of Sustainability-related Courses, 2008-2009

Undergraduate Courses

Albers School of Business & Economics

BETH 351 Business Ethics
BLAW 370 Business & International Law
BLAW 476 International Law
ECON 468 Natural Resource and Environmental Economics
ECON 478 Urban/regional Economics
MGMT 320 Global Environment of Business
MGMT 489 Business Policy & Strategy
MKTG 350 Marketing Principles
OPER 360 Manufacturing and Service Operations

College of Arts & Sciences

ANTH 230 Cultural Analysis
ENGL 110 College Writing: Inquiry and Argument
EVST 100 Intro. To Geosystems
EVST 200 Intro. To Ecological Systems
EVST 360 Nature Writing and Environmentalism
EVST 392 Intro. To Geographic Information Systems
EVST 473 Sustainable Development in the Tropics
EVST 474 International Environmental Politics
EVST 475 Impact Statement Analysis
EVST 481 Living in the Environment
EVST 482 Current Issues in Environment and Society
EVST 482 New Orleans: Legacy of Katrina
EVST 490 Senior Synthesis
EVST 491 Policy and Program Research
EVST 495 Internship
EVST 496 Independent Study
HIST 351 Environmental History
PHIL 378 Environmental Philosophy
PLSC 300 Environmental Politics
PUBA 350 Exploring the American City: Urban Design and Community Development
PUBA 353 Housing Design and the Sustainable Community
SOCL 202 Human Ecology and Geography
THRS 324 Religion and Ecology

College of Science & Engineering

BIOL 101 – Principles of Biology
BIOL 162/172 – General Biology II
BIOL 163/173 – General Biology III
BIOL 470 – General Ecology
CEEGR 341 – Biological Principles for Environmental Engineers
CEEGR 342 – Environmental Engineering Chemistry
CEEGR 371 – Water Resources I
CEEGR 425 – Transportation Engineering
CEEGR 472 – Water Resources II
CEEGR 473 – Principles of Environmental Engineering
CEEGR 474 – Water Supply and Wastewater Engineering
CEEGR 475 – Hazardous Waste Engineering
CEEGR 476 – Environmental Law and Impact Studies
ECEGR 450 – Electromechanical Energy Conversion
ECEGR 451 Power Systems
ECEGR 457 Electromechanical Energy Conversion Laboratory
ECEGR 491 Renewable Energy Systems
ISSC 100 Introduction to Environmental Science
ISSC 207 – Air & Water
ISSC 481 – Feed the World
ISSC 482 – Global Climate Change
MEGR 350 – Materials Science

Graduate Courses

Albers School of Business& Economics

MBA 512 Business Ethics and Social Responsibility
MGMT 586 Entrepreneurship: New Venture Plan
MGMT 574 Entrepreneurial Leadership: Social Entrepreneurship
MKTG 591 Sustainability Strategies for Business
OPER 564 Supply Chain Management

College of Arts & Sciences

PUBM 569 Community and Economic Development

College of Education: Master in Teaching Program

TEED 521 Elementary Curriculum, Instruction, and Assessment

School of Theology and Ministry

STMM 506 Earth Community, Earth Ethics

Law School

The Law School offers the following courses that are related to sustainability issues:

- Environmental Law Fundamentals
- Land Use Regulation
- Climate Change
- Natural Resources Law
- Growth Management
- Environmental Justice Seminar
- Environmental Enforcement
- Environmental/Land Use Externship

APPENDIX D: Co-curricular Departments

Some of the departments that comprise Co-curricular programming include:

The Office of the Vice President for Student Development provides institutional leadership by guiding the offices that advance diversity, promote and ensure health and safety, support career and academic services, develop student leadership, coordinate campus activities, explore student ethical development, enforce community standards, and create community both on and off campus.

The Athletics Department exists to champion the holistic development of student-athletes, inspiring a vital and engaged campus community through the development and maintenance of a premier, nationally prominent NCAA Division I athletic program, in the spirit of the Jesuit tradition

The Career Services Office helps students and alumni discover their career passion by integrating the Jesuit core values and introducing a process of personal discovery and discernment. This process assists students with discovering their unique talents and gifts and their life's direction in relationship to their individual needs and their connections with others in a community. This is an on-going, lifetime activity.

Commuter and Transfer Student Services supports educational success and fosters a sense of belonging, involvement and connection between commuter students and campus.

Counseling and Psychological Services seeks to promote and maintain the psychological health of students and the campus community The Counseling Center's mission rests upon the Jesuit and humanistic values of self-reflection, life-long learning and the development of the whole person.

Housing and Residence Life provides safe and secure residence halls with diverse living options, student centered service, and programs and systems that foster student learning, development, and community living.

The International Student and Scholar Center exists to provide assistance to our international students in all matters pertaining to cultural adjustment, academic assistance, community building, immigration, visa status, document certification, employment authorization and more. Every year, the ISC sponsors several workshops on immigration-related issues.

Judicial & Integrity Programs provides students with the tools needed for success in a pluralistic society by providing feedback about behaviors that both enhance and harm the academic community, as well as assistance and opportunities in modifying such behaviors.

The Leadership Development program promotes the development of value-driven leaders in a diverse and changing world. It promotes the belief that everyone has the potential to be a leader. The program sponsors a variety of programs to encourage students to find the leader within, experience leadership in different capacities, and celebrate the accomplishments of campus leaders.

The Office of Multicultural Affairs is committed to supporting the academic, personal, social, and cultural success of students of color.

New Student and Family Programs Office, in an effort to assist in the transition to campus, provides students access to academic advising, information about campus life, and the opportunity to create community with other new students.

The Department of Public Safety and Transportation Is committed to ensuring a safe and secure environment for the university community, and providing campus members resources to assist in moving to and from campus.

Recreational Sports provides university community members with an opportunity to enhance their overall physical and mental wellness through various supervised and/or self-directed programs and activities.

Student Activities, in collaboration with many student organizations, provides a variety of entertainment for the students on and off campus, and develops an activities program that meets the social and cultural needs of the undergraduate students.

The Student Health Center is focused on enhancing levels of wellness and empowering students to be self-directed in their own care. In addition, these college years are seen as a unique window of opportunity where health care providers can influence health promoting life-style behaviors.

The Office for Wellness and Health Promotion exists to enhance the health and well-being of the campus community and empower students to make positive health choices through education, prevention, collaboration and peer support.

Appendix E: Communications Plan

This communication plan is an example of communications tactics the university may consider using when developing an official plan that will illustrate university-wide sustainability and climate change reduction efforts. The plan will describe how to reach campus members, community members and partners. Individuals, groups on campus, and the university can use these tactics in their own planning. The official plan will also include expectations and assign responsibilities for each of the tactics. Sample tactics might include the following activities:

Campus Members (Internal)

- Post drafts of the Climate Action Plan, progress, quarterly and annual sustainability reports on the university's Sustainability web site
- Announce Climate Action Plan, progress and other reports via student announcements and the online Faculty and Staff newsletter
- Link plans, reports and tactical programs and initiatives to campus partners' social media and web pages, such as sustainability-related student clubs and campus committees
- Use advertising, events, web and social media to promote specific sustainability projects
- Develop and maintain a sustainability blog
- Use peer-to-peer groups and word-of-mouth to make announcements, educate and promote preferred behavior
- Pair staff educated in sustainability practices with campus events as a live reminder of preferred behavior

Community Members and Partners (External)

- Send a press release to local media and blogs announcing the Climate Action Plan, progress and annual reports
- Post Climate Action Plan, progress and related reports on University News and the home page's rotating flipper
- Publish noteworthy initiatives in the neighborhood newsletter and alumni magazines
- Identify tangible newsworthy activities that could generate news coverage and seek opportunities to publish
- Seek opportunities to post campus initiatives on partners' websites (for example, announce a university-sponsored bike workshop on Cascade Bicycle Club's website)

All Audiences

- Develop and maintain a quarterly report updating Climate Action Plan efforts, posted to the sustainability web page
- Develop and maintain an Annual Sustainability Report, posted to web

Appendix F: Updates to Climate Action Plan Version 1

Page	Section	Update
4-6	Executive Summary and About Seattle U	Moved the Executive Summary to be before About Seattle U
5	Table 1	Changed "Landfilled Garbage" to "Landfilled Waste"
14	Deepening and Advancing Sustainability	Added to section title "The Goals"
15	Current Offerings	Added to the last sentence "…some of…" to read "However, findings do illustrate that sustainability is incorporated into some of the academic offerings throughout the university.
18	Future Goals and Strategies	The following paragraph was added: The Academics sub-committee of the President's Committee for Sustainability wants to be clear that Seattle U addresses sustainability in a broad sense, rather than one limited to environmental issues. Therefore, the Academic Strategic Action Plan goals stated above will be implemented with students learning about the environmental, social, and economic dimensions of sustainability and climate change.
20	Title	Changed "Student Development" to "Co-Curricular"
20	About	Where "Student Development" is referenced, changed to "Co-Curricular" and reworded sentences accordingly, such as: 1. Changed the first sentence from "The Division of Student Development works…" to "These areas work…" 2. Added sentence as first sentence: "The goal of co-curricular programming is to provide students opportunities for learning outside the classroom." 3. Added sentence as second sentence: "Co-curricular programs include those overseen by the Director of Student Development, Athletics, Mission and Ministry and Athletics. 4. Changed "Student development provides programs, services and activities…" to "Co-curricular programming provides resources, services and activities…"
20	Current Efforts	Changed first sentence from "The majority of departments within the Division of Student Development…" to "Many co-curricular departments…"

Page	Section	Update
22	Future Goals and Strategies	Where "Student Development" is referenced, removed or changed to "Co-Curricular" and reworded sentences accordingly, such as: 1. Removed "Student Development" from the first sentence 2. Changed sentence "To deepen and expand sustainability….within the Division…" to "To deepen and expand sustainability…within co-curricular programming…" 3. Changed "The Division of Student Development is…" to "Co-curricular departments are…"
22	Strategy 2.1	Reworded section to: "A Task Force will be charged with overseeing the development and implementation of co-curricular sustainability initiatives and programs. Steps in this process include appointing a staff member from each department to be the respective sustainability representative, and organizing and setting group goals."
22	Strategy 2.2	1. Changed "The Division" to "Co-curricular Task Force" and its variations, as appropriate. 2. Replaced in the sentence "Learning outcomes will be developed…" …into the Student Devepolment strategic plan;…" with "…into departments' strategic plan;…"
23	Strategy 2.3	Changed "The Division" to "Co-curricular Task Force" and its variations, as appropriate.
23	Funding and Tracking Progress	Changed "The Division" to "Co-curricular Task Force" or "departments" and its variations, as appropriate.
24	Future Goals and Strategies	Added strategies 2.4 Develop a comprehensive peer education program and 2.5 Develop guidelines for organizing and implementing sustainable events on campus. Changed the Responsible party from Student Development Division to Co-curricular Sustainability Task Force
25	Table 2. Ranking of Activities that Contribute to Emissions	Used the data from Clean Air Cool Planet v.6.6 and updated incorrect data.
25 and 27	Graph 1 and Table 3	Used the data from Clean Air Cool Planet v.6.6 and updated incorrect data.

Page	Section	Update
28	Goal 3.1 Increase Efficiency of Existing Buildings	The word 'Existing' was added to the goal to emphasize that this goal does not include new buildings. Original Goal: Reduce 2009 building-related emissions 57% by 2020 and 61% by 2035. The percentage reductions attained by 2020 are from the ten year Facility Improvement Measures McKinstry did for Seattle U as part of the Climate Action Plan development. See Appendix E in the Climate Action Plan. We assumed both that we would plateau between 2020 and 2025, and that we'd pick up minor, incremental improvements in later years. The percentage reductions attained between 2025 and 2035 are an estimate made with McKinstry's guidance. The estimate assumed behavior changes, minor facility improvements and primarily that by 2035 we may use more renewables because renewable technology will become more affordable and practical. There are no hard numbers to support years 2030-2035. All numbers assume we would pursue McKinstry's Facility Improvement Measures, which reflect the best case scenario. Although, we did understand we would likely not follow all of them. The intent was to give us a target reduction to head towards in ten years. New Goal: Reduce 2009 building-related carbon emissions 15% by 2020 and 28% by 2035. Reduce 2009 building energy use 18% by 2035. These estimates were updated from the original Climate Action Plan to reflect only those improvement measures that are considered "highly probable". Using this more conservative approach will allow Seattle University to better face the real-life challenges of moving towards climate neutrality based on current economic and technological constraints.
26	Table 6	1. Changed the total emissions saved to 2650 for rounding purposes. 2. Added Table 5 footnote regarding the total 2650: "Total may not equal sum due to rounding."
31	Goal 3.2 Current Emissions and Strategies	To third paragraph, changed second sentence from "Strategies departments use include…" to "Strategies departments use to manage emissions include…" and from "…replacing with more efficient models…" to "…replacing vehicles with more efficient models…"

Page	Section	Update
31	Future Goals and Strategies	Changed in second sentence from "…30 metric tons will be reduced by 2020…" to "…35 metric tons…" to correct math error
32	Strategy 3.2.2	Changed outcome to "Campus-wide policy for vehicle and equipment purchases, maintenance and disposal"
35-36	Goal 3.3 Provide alternatives to Air Travel	2008 instead of 2009 emissions were used for Study Abroad in table 8 and the mileage was incorrect. Added reducing Athletic's air miles to the Future Goals and Strategies.
38	Table 12	1. Changed Table Title to "Target Effect on SOV Rate due to Reduction Strategies targeting SOV Drivers" to correct table description. 2. Changed 2009 Percent of Population Utilizing SOVs from 39% to 43% to correct an error that did not reflect both students and employees. The percents for the following years correctly reflect both students and employees.
44	Future Goals and Strategies	1. Changed "Over the next 25 years the university is committed to reducing its net solid waste emissions…" to "Over the next 25 years the university is committed to reducing its waste diversion rate…." 2. Changed "Target emissions reductions are shown…" to "Target waste reduction rates are shown…"
45	Table 14	Changed Table Title to "Target Percent of Total Waste Stream Sent to the Landfill due to Reduction Strategies" to correct table description.
44, 45-46	Goal 3.5 Send Less Waste to the Landfill	The original CAP mixed up short tons of landfilled waste with the metric tons of carbon dioxide generated by the waste in the Current Emissions and Strategies and Future Goals and Strategies sections. The new text corrects these errors. Further Clear Air Cool Planet calculator v6.4 was used in 2009. In 2011 it has been updated to v6.6 and the same data inputs generate different data outputs, so the new outputs are being used.
i	Appendix A Structure	Changed subcommittee from "Student Development Programs Subcommittee" to "Co-curricular Programs Subcommittee"
ii	President's Committee for Sustainability	Added Marketing & Communications Subcommittee
vii	Appendix D	Changed title from "Student Development Departments" to "Co-curricular Departments"

ENDNOTES

[i] (1987). Brundtland Commission. Report of the World Commission on Environment and Development: Our Common Future**.** Chapter 2: Towards Sustainable Development. Retrieved from http://www.un-documents.net/wced-ocf.htm 04/12/10.

[ii] (2006). Society of Jesus, Oregon Province. Regional Sustainable Development: A Plan of Action. Retrieved from http://www.seattleu.edu/uploadedFiles/Sustainability/Regional%20Sustainable%20Development--Plan%20of%20Action.pdf 04/12/10.

[iii] Source: Emissions data in the university's Utility Manager Pro software.

[iv] Business air miles are round trip and are approximated according to the ACUPCC Implementation Guide. The guide states that "…signatories may use statistics on the average price per passenger air mile from the Air Transport Association of America to convert their total air travel expenditures into a rough estimate of passenger air miles." (pg.17-18). Seattle University used a factor of $0.25 per passenger air mile.

[v] Athletics and study abroad air miles are round trip and are approximated based on miles between Seattle, WA and city or country of destination.