OBERLIN COLLEGE
ENVIRONMENTAL POLICY
IMPLEMENTATION PLAN

Adopted by the General Faculty of Oberlin College
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I. GUIDING PRINCIPLES

As an institution of higher learning, Oberlin has a special obligation to ensure that the ways in which faculty, students, and staff learn, teach, manage internal affairs, and interact with the broader community serve as examples that others are inspired to follow. Consistent with our longstanding efforts to lead courageously on morally sensitive issues of social justice, Oberlin College embraces a commitment to environmental sustainability[1].

The core mission of Oberlin College is education. In line with this mission, Oberlin College will use its sustainability efforts as a powerful educational tool to prepare students to be leaders in humanity's response to current and future environmental threats. To that end, Oberlin College is committed to developing a mutualistic and sustainable relationship between the human species and the rest of the natural world through teaching and research, design and implementation of institutional and fiscal policies, and management of energy flows and material cycles.

Oberlin College recognizes that it is not enough to merely decrease the rate at which we deplete and degrade local and global resources. Instead, we will strive to *improve* biophysical, economic and social systems through our operations as well as through education. The environmental and social implications of our activities will inform the way priorities are set and decisions made throughout the institution, including decisions related to development and management of buildings and grounds, transportation of materials and people, purchasing of materials, provision of food, financial and human capital investments, and the development and support of curriculum.

As we strive to build on our accomplishments, we are mindful that our metrics are imperfect and that technology is constantly evolving. Achieving environmental sustainability should occur in concert with the College's other goals and priorities and within existing fiscal constraints. Our sustainability efforts will require continual examination and refinement through life-cycle assessment of existing and alternative practices. We will employ the intellectual strength of our faculty, students, and staff to close gaps and seize opportunities as they become evident and to make informed decisions by exploring the environmental costs and benefits of proposed actions.

II. EDUCATION

A. Guiding Principles

One of the most important advances in modern human understanding is the dawning awareness that the world is stitched together as systems of systems that make up the ecosphere. The totality cannot be fully understood from the perspective of any single discipline. Future generations will face problems and issues that require responses that transcend disciplines. As an institution of higher learning, Oberlin College has a responsibility to ensure that we educate our community members effectively for this new reality. All members of the institution will need to develop new analytical skills, perspectives, and the intellectual capabilities to recognize patterns that connect disparate phenomena over long periods of time.

[1] The Environmental Protection Agency says that "sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations." Sustainability is the fusion of three principles: ecological health, viable economics, and social equity. This policy focuses on ecological health without the exclusion of the economic viability and social equity.

Oberlin's historical position of leadership derives not solely from its efforts to solve problems of race and social equity, but also from our refusal to accept difficulty as a sufficient excuse to avoid critical issues. This document identifies gaps in our understanding. Our faculty, staff and students represent a resource that is both critical and unique in addressing these gaps and finding solutions to seemingly intractable problems. Education at its very best is about wrestling with difficult issues. Addressing sustainability is not in conflict with our educational mission or outside of it, but absolutely integral to our purpose and strengths as an institution. The College has many important curricular goals. The College recognizes the need to balance all of these curricular goals; it also recognizes that these goals frequently complement each other in synergistic ways.

All members of the Oberlin community are involved in education -- both as teachers and learners. Students are obviously a main focus of Oberlin's educational efforts in a variety of contexts: the classroom, residential life, extra- and co-curricular activities. But Trustees, faculty, staff, administration and our wider network of alumni and supporters all have the potential to learn from and contribute to education associated with our sustainability efforts. Even more broadly, as a leader in sustainability, Oberlin College seeks to educate other institutions and the general public by serving as a testing ground and a model for successful sustainability strategies.

To fulfill these goals, Oberlin will pursue 3 main educational strategies, outlined below. More specific exploration of how these principles are to be implemented in particular domains (e.g., energy, purchasing) appears in each individual section of this plan.

1. Engage, educate, empower and motivate our community around environmental stewardship and environmental problem solving.
2. Communicate our successes, initiatives, and lessons learned to effectively promote responsible environmental stewardship both on campus and beyond.
3. Train all community members about the environmental policy and how to implement it in their campus roles.

Because all members of the Oberlin community are involved in education, all members of the Oberlin community share in the task of ensuring that Oberlin realizes its educational goals. The College and Conservatory Deans, as leaders of their respective faculties, have particular responsibility to lead college faculty in incorporating environmental sustainability broadly throughout the curriculum, where appropriate. The Office of Communications, the Office of Environmental Sustainability, and the Committee on Environmental Sustainability have primary responsibility for communicating Oberlin's sustainability efforts. Human Resources, department heads and the Office of Environmental Sustainability are responsible for ensuring that all community members receive information about this Plan and training to ensure they are able to implement the portions relevant to their roles.

B. Current Status

Currently, environmental sustainability lessons are incorporated into the classroom curriculum, extracurricular and employment opportunities, and throughout the campus environment in a variety of ways.

Curricular Education. Education on environmental issues occurs in many places in the curriculum of both the College and Conservatory. The College's Environmental Studies Program offers both a major and a minor in environmental studies for students who wish to focus extensively on environmental issues. Courses that count towards the major are housed not only in the Environmental Studies program, but also in departments across the curriculum ranging from English and Russian to chemistry and physics.

Conservatory courses in the TIMARA program and ethnomusicology also focus on issues of sustainability.

The College continues to integrate environmental education into other areas of the curriculum. For example, in 2014 Oberlin College was awarded a Luce Initiative on Asian Studies and the Environment (LIASE) Exploratory Grant by the Henry Luce Foundation. The College is using the grant to build broader awareness of Asia and environmental studies on campus and in the community. Activities include faculty-development seminars on sustainability and resilience in Asia; curriculum-exploration grants for faculty to add new content on Asia and the environment; and two pilot study trips in China and Japan for faculty and students during Winter Term and early summer 2015. Seminar and public programming have focused on topics such as art to survive disasters by, social and scientific aspects of dam building in Asia, climate change, and the seismic history of China and its social and historical implications. The initiative may prove to be an effective model for how environmental sustainability can be incorporated into other areas of the curriculum.

Students, faculty and staff also collaborate on a wide array of research projects related to environmental sustainability. For example, the Environmental Dashboard project teaches students research, computer, and community outreach skills while helping to promote resource conservation on campus and in the wider community. The new Community-Based Social Marketing (CBSM) Research project is yet another opportunity for students across disciplines to learn about the science of behavior change. This award-winning project has involved 16 students to date.

Co-curricular, Extra-curricular, and Employment Opportunities. Outside of the formal curriculum, there are a variety of organizations working to educate the Oberlin community about environmental sustainability. The Resource Conservation Team (RCT) is a team of students employed by Facilities who work on reuse, recycling, waste reduction, composting, and organic gardening. The student-run cooperative association, OSCA, participates in composting and sustainable purchasing initiatives: all of their organic materials are collected to compost and they purchase locally and sustainably as often as possible. The Campus Dining Service (CDS) Recyclers encourage the use of reusable mugs, vegetarian options, food rescue, and the Real Food Challenge among students. These programs provide educational opportunities for the students participating in the projects as well as the community that benefits from them.

The Bonner Center for Service and Learning provides opportunities for student leaders to engage in meaningful ways with the Oberlin community; many of these curricular and co-curricular positions include sustainability-related projects, such as teaching assistantships for ENVS 101 classes, working with the Zion Community Garden, or the new AmeriCorps transportation fellowship.

There are many places on campus that students can get jobs offering them the opportunity to both learn about and contribute to sustainability. The Office of Environmental Sustainability internship program offers approximately eight paid student positions. These interns expand the capacity of the office by implementing a variety of programs and initiatives from Ecolympics to purchasing, from the OES Hangouts to communications. In the Adam Joseph Lewis Center, students maintain the Living Machine and wetland, organically manage the gardens and orchard, and produce food for the community.

Additionally, there are countless sustainability-related campus events each year. As a part of the convocation series, Oberlin has brought in world-renowned speakers whose work centers on environmental sustainability (including Amory Lovins, Wendell Berry and Wes Jackson). Student organizations such as Anti-Frack and the Responsible Investing Organization host talks and workshops on a regular basis. In tandem with Ecolympics, Oberlin's annual three-week water and electricity reduction competition, the Office of Environmental Sustainability facilitates dozens of campus events from DIY

workshops to garden service days to guest speakers. These events are free and open to the public, and are regularly attended by students, faculty, staff and community members. More on this long-standing, nationally recognized competition can be found online at oberlin.edu/Ecolympics.

Facilities and Residential Education. Oberlin College also seeks to use its facilities and grounds as an educational opportunity. The Adam Joseph Lewis Center (AJLC), one of the most iconic buildings on campus, was designed to be a learning laboratory for its occupants and visitors alike. Student workers perform much of the property's upkeep including water quality testing on the Living Machine, organic management of its landscape and food production systems, and caring for a flock of chickens. Harvested food is donated to Oberlin Community Services or preserved on-site. Numerous innovative student research projects have grown in response to the AJLC's groundbreaking technologies and advanced data monitoring system. Students continually shape and develop the AJLC's educational outreach by leading tours, developing signage, blogging, and generating new projects both at the AJLC and in the greater Oberlin community.

The Office of Residential Education supports three living communities that focus on environmental responsibility. There is the sustainability-themed floor in Burton, the LEED Silver certified Kahn dorm for first year students, and SEED House. These three communities are set in different locations to appeal to students from their first year at Oberlin College through their final year. In these communities, students learn sustainable living practices such as ways to conserve water and electricity. In addition, the students in these communities have the opportunity to connect with other students who are interested in environmental responsibility to work on larger campus initiatives such as Ecolympics, composting, recycling, infrastructure changes to improve sustainability, and educating other students about sustainable living. Some of the programs sought out by these communities include attending lectures on sustainability, volunteering at the community garden, and attending an eco-tour of Lorain County.

C. Engage, Educate, Empower and Motivate

All of the College's sustainability efforts represent a potential educational opportunity: a chance to engage community members in issues of sustainability, educate them about problems and potential solutions, empower them to seek out answers using rigorous intellectual tools, and motivate them to take action. Oberlin College seeks to create an institution that serves as a living, learning laboratory that actively engages students, faculty, staff and visitors in sustainability. This kind of education can and does occur through multiple venues (co-curricular, facilities, etc.), but will have the greatest impact and allow for significant cross-disciplinary learning if it is dispersed as broadly as practicable throughout the curriculum.

While the College and Conservatory have both incorporated environmental issues into parts of their curricula, Oberlin has yet to systematically address how sustainability is best incorporated throughout the curriculum or to have a campus-wide dialog about how to do so. Oberlin College uses AASHE's Sustainability Tracking and Rating Systems, better known as STARS to comprehensively evaluate College progress on sustainability[2].. Currently, for STARS reporting, the College only accounts for the Environmental Studies Program as having defined learning outcomes related to environmental sustainability; other areas of study have the potential to develop such learning outcomes, but have not yet done so. Future revisions of this Plan will need to articulate exactly how sustainability is best infused into the curriculum. The 2015 strategic planning process provides an important opportunity for engaging

[2] AASHE is the Association for the Advancement of Sustainability in Higher Education. STARS is a program of AASHE that STARS is a self-assessment tool used by institutions of higher education to measure their sustainability progress and benchmark accordingly.

faculty across all divisions and developing a vision of sustainability relevant to all disciplines and areas of study. Potential strategies include:

1. Identify and tangibly support areas where the intellectual and pedagogical strengths of the College can be tapped to identify and address critical issues of sustainability.
2. Provide clear identification of sustainability-related courses in the Course Catalog.
3. Formalize and incentivize the further development and continuation of sustainability-related courses, particularly those that engage in ways to more effectively meet the objectives of the Climate Action Plan and align with STARS, in balance with the college's other goals and learning outcomes.
4. Capitalize on our need to develop a more complete understanding of our total environmental impact (e.g. conducting full life cycle analysis and accounting for embodied carbon) as an educational opportunity.
5. Identify and support entrepreneurial opportunities that can bring both the city and regional businesses into the educational experience of students.
6. Build mechanisms for maximizing the educational value of any sustainability related project directly and explicitly into the planning process. For example, student and faculty research can be incorporated into the design process; informative displays and truth windows can help educate about innovative technologies; assessment of technology can be integrated into the curriculum.

D. Communicate

Oberlin College seeks to create a cultural norm of sustainability, and to serve as an example to other institutions. Further, it seeks to maintain its position as a leader of sustainability by continuing to attract talented faculty, staff and students to Oberlin. To do so, it is important to regularly communicate the College's efforts, accomplishments and lessons learned both within and beyond Oberlin. Strategies for achieving this goal include:

1. Maintaining sustainability as an integral part of the Oberlin narrative (through the Office of Communications, Admissions, Development and anyone else that represents the Oberlin brand): sustainability is a shared value that is expressed through our financial spending, conservation practices, facilities planning, and curriculum.
2. Network with other institutions in higher education and the region, both to be a model of sustainability practices and to learn from their sustainability efforts.
3. Continue to apply for external sustainability related awards (e.g. AASHE awards), and provide support to faculty students and staff who do so.
4. Create an internal award mechanism for Oberlin faculty and staff to be recognized for their efforts supporting sustainability in Oberlin.
5. Report regularly on sustainability accomplishments to all constituencies. Communication venues include, but are not limited to: The Source/Oberlin OnCampus, annual reports to General Faculty, OES and departmental newsletters, press releases, and the Alumni Magazine.

E. Train

The effective implementation of this plan requires at a minimum that all community members be informed about the contents of the Environmental Policy and Implementation Plan, and receive necessary training to implement it in their campus roles as appropriate. Strategies specific to particular parts of the

plan appear in each Education subsection. Below are some overarching principles that guide these efforts.

1. Make the Environmental Policy and Implementation Plan easily accessible and available to all Oberlin students, faculty, and staff via BlackBoard.
2. Develop concise and user-friendly summaries of the parts of the Environmental Policy and Implementation Plan that are relevant to particular roles (e.g., administrative assistants, students).
3. Provide these summaries to all community members yearly via email, and make these summaries easily accessible and available to all Oberlin students, faculty, and staff via BlackBoard.
4. Include a discussion of the environmental policy and plan as it pertains to the College's sustainability commitments in all orientations of new members to the community (faculty, staff, students).
5. Provide opportunities for training (e.g. technological skills, curriculum development) as needed.

III. ENERGY USE AND PRODUCTION

A. Guiding Principles

Energy use and production release CO_2 as well as a variety of environmental pollutants with local, regional, and global impacts. Fossil fuels are especially problematic. The scientific consensus is that humans have already added too much CO_2 into the natural system. Human behavior is adversely impacting climate stability by increasing land- and sea-surface temperatures, thus creating more extreme weather events. An overwhelming majority of climate scientists have identified 350 ppm as a safe upper limit for CO_2 in our atmosphere. Currently our atmosphere contains 400 ppm of CO_2[3]. Thus as a species we must not only reduce carbon emissions to zero, but also take actions to sequester carbon from the atmosphere. Removing CO_2 and other greenhouse gases from the atmosphere on a planetary scale is essential to stabilizing global climate, and its achievement is one of the greatest challenges to the survival of humankind.

As an institution of higher education, Oberlin College has a special obligation to be proactive and responsible in its management of energy. Consequently, it has committed to the long-term goal of "climate positivity", a condition whereby the release of CO_2 and other greenhouse gases through all activities associated with College operations is less than other activities that remove carbon from the atmosphere. However, we must also remember that carbon is but one part of a complex sustainability picture; as we minimize our carbon footprint, we will need to balance the benefits of carbon reduction against other measures of sustainability, as well as against economic and social considerations.

Responsible energy management requires that environmental costs be considered along with operational costs. The College recognizes that sometimes a monetary premium is required to achieve important environmental benefits. Oberlin also recognizes that technology, energy costs, and related knowledge are dynamic, and that options and goals must be continuously assessed to maintain responsible energy management. Many energy conservation measures can be adopted and altered quickly, but changes in the infrastructure (buildings, heating plant, consumption of electricity) will require careful research, long-range planning and large capital investments in addition to advancements in energy technology.

[3] http://www.esrl.noaa.gov/gmd/ccgg/trends/weekly.html

To meet our energy goals, the College will pursue three main strategies:

1. Conserve energy as much as possible (i.e. changing human behavior to reduce consumption).
2. Ensure the energy that we use is used efficiently (i.e. using technology that accomplishes more work with less energy input).
3. Aggressively pursue a renewable energy portfolio.

All community members are responsible for ensuring that their daily behavior minimizes energy use. OES and Residential Education have primary responsibility for promoting conservation behavior. The OES, Facilities Operations, and Facilities, Planning & Construction are charged with maximizing efficiency and seeking out renewable resources. The Vice President of Finance is responsible for providing accurate information about our abilities to meet these goals within realistic budgetary constraints, and working to support these goals within those constraints.

B. Current Status

Oberlin College has shifted from being almost entirely reliant on fossil fuels for its energy to incorporating more renewable sources. For at least 100 years, the College was primarily heated by coal. In 2014, as part of the College's carbon neutrality efforts, the central heating plant converted from coal to natural gas as a transition fuel for the immediate future and back-up fuel for the longer term. Burning natural gas creates 40% to 50% less CO_2 than coal, and does not create particulates, ash, or some other airborne emissions like mercury.[4] Natural gas can also be turned on and off quickly in response to changing weather conditions, unlike coal. However, despite its benefits, natural gas is still a fossil fuel that emits carbon when burned. There are also serious environmental and health concerns associated with some natural gas extraction practices currently in use. Fugitive methane emissions during the extraction process and a lack of adequate regulations make the actual level of greenhouse gas emissions associated with natural gas uncertain. Because of these concerns, the College seeks to minimize natural gas use as quickly as possible.

To further this goal, the College has identified "energy zones," or clusters of buildings, that can in stages be weaned off of the central heating system, thus lessening demands on the central heating plant. The energy zones can then take advantage of the best-suited renewable and advanced energy for the set of buildings associated with a given zone. Such technologies might include electric compressor pumps, like air-to-air, variable refrigerant flow (VRF), and ground-source (geothermal) heat pumps. More on this plan can be found in the Climate Action Plan [http://reporting.secondnature.org/site_media/uploads/cap/408-cap.pdf], which describes the College's road map to achieve carbon neutrality by 2025.

The move to electric compressor pumps is especially appropriate given that Oberlin Municipal Light and Power Services (OMLPS), Oberlin College's municipal electricity provider, has secured contracts to provide 90% renewable electricity by 2015. In addition, Oberlin College produces electricity via photovoltaics. The Adam Joseph Lewis Center (AJLC) rooftop and parking pavilion are equipped with solar panels to provide energy for that building. In 2012, Oberlin College contracted with SPG Solar and Spear Point Energy to install a 2.27 mega-watt (MW) solar array past the north athletic fields on campus property. This solar array was projected to produce approximately 3,000,000 kWh per year (approximately 12% of the College's current electricity needs), and has surpassed these expectations in the first years. The price paid for this electricity was also below market rates, resulting in a financial savings for the College Between the green energy from OMLPS and the solar arrays, Oberlin College's

[4] http://www.epa.gov/cleanenergy/energy-and-you/affect/natural-gas.html

electricity portfolio is nearly 100% renewable in 2015.

The College has undertaken a number of efficiency upgrades in recent years. From 2011-2013 a comprehensive lighting retrofit effort upgraded ballasts, lamps, and fixtures in more than 80% of campus buildings, as well as parking lots and outdoor lights. Recently renovated dorms have received new high efficiency windows and insulation on exterior walls.

The College is also pursuing several strategies to encourage resource conservation through behavior change. All dorm residents and some staff members have access to real-time feedback about their building's resource use through the Campus Resource Monitoring System (http://buildingdashboard.net/oberlin/). Research conducted by faculty and students at Oberlin and elsewhere has demonstrated that providing feedback on resource use can reduce electricity consumption by up to 56% during a 3 week long energy reduction competitions among dormitories. "Environmental orbs" that glow different colors depending on current rates of electricity and water use provide a highly accessible source of feedback, and are installed in most dormitories. The College also boasts one of the most longstanding energy conservation competitions in the country: Ecolympics, which is a three-week water and electricity conservation competition between residence halls tied to the Dashboard monitoring system and a precursor to the nationwide Campus Conservation Nationals. During the three weeks of the competition, there are dozens of campus and community events centered around sustainability -- from film screenings to garden service days.

The College has recently launched a research project using Community-Based Social Marketing techniques to identify and influence high-impact behaviors through behavior change programs. Educational campaigns, like the Green Room and Green Office programs, have recently been implemented to encourage energy conservation practices.

C. Reducing Energy Consumption Through Conservation and Efficiency

Improvements to Infrastructure and Technology. Buildings and activities within buildings (e.g. heating and cooling, lighting, plug loads) currently account for more than 90% of the energy consumed on campus[5]. Therefore building renovation and the selection of appliances that minimize energy use (see Section III on buildings) is an essential strategy to pursue. Despite recent efficiency retrofits, room for substantial additional improvement remains. The College can achieve greater energy reductions (as well as considerable cost savings) by improving the thermal efficiencies of buildings and the operating efficiencies of equipment. The development of identified energy zones will also result in efficiency savings.

Behavior Change. Energy conservation through behavior change is one of the most effective and least expensive ways to reduce energy consumption; it is estimated that at least 10% of the carbon reductions required to achieve carbon neutrality can come from behavior change. Expanding and improving the monitoring of resource use in buildings should remain a priority when renovations or new construction make it possible.

The College will continue to employ Community Based Social Marketing as a proven method for designing effective behavior change strategies and programs. Potential behaviors to target will be evaluated for their overall impact on the College's energy load as well as the malleability of the behavior.

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5 http://rs.acupcc.org/search/?institution_name=oberlin&carnegie_class=%3F%3F&state_or_province=%3F%3F

Behavior change strategies may include education, incentives, prompts, and/or social media campaigns designed to help students, faculty, and staff to overcome the barriers associated with performing conservation and efficiency behaviors.

D. Renewable Energy

Beginning in 2015 the College receives nearly all of its electricity from renewable resources. However, base load electricity needs are projected to increase, particularly as energy zones using electric heat pumps are developed. Thus the College, in collaboration with OMLPS, will need to monitor load growth and remain alert to further potential renewable electricity sources in the future.

To minimize natural gas use as quickly as possible, the College will also aggressively seek renewable energy sources to heat the campus. Although the uncertainty of future technology and fuel sources make the replacement for natural gas currently difficult to identify, biofuels are one potential option.

E. Education

Engage, Educate, Empower and Motivate. The strong link between energy use and environmental quality provides an ideal opportunity to engage and educate Oberlin students, faculty, staff, and the rest of the community in efforts to reduce energy use and promote the desired shift to climate positivity. All of the College's steps to decrease energy consumption and carbon emissions are educational opportunities that should be routinely capitalized on. Further, the College recognizes that the metrics of measuring carbon and taking responsibility for carbon that is emitted elsewhere on our behalf are imperfect. Striving to develop and act upon the most inclusive and sophisticated understanding of the impact of our actions is not only a goal worthy of our intellectual and moral heritage, but also a tremendous educational opportunity. Strategies for capitalizing on this educational potential include (but are not limited to):

1. Take advantage of the educational opportunities that come with the installation of new technologies by installing signs, displays, and/or allowing visibility/accessibility so that people can learn about these systems.
2. Provide institutional support for and make use of the user-friendly web-based feedback displays that provides building occupants with real-time feedback on the amount of water and electricity being consumed.
3. Engage students, faculty, and staff in the process of designing policies and educational campaigns to decrease energy use.
4. Engage students, faculty and staff in the process of researching and evaluating new technologies.
5. Leverage carbon offset calculations and program evaluation as an educational opportunity through the Carbon Management Fund.
6. Continue active student involvement in Community Based Social Marketing (CBSM) research, which teaches applied research skills while also developing effective conservation behavior change programs.

Communicate. The College's accomplishments in renewable energy and carbon neutrality offer an important avenue for changing broader institutional norms in higher education. The College will seek to:

1. Inform both the college community and external audiences about energy improvements made by the College.
2. Include the College's energy accomplishments as an integral part of the Oberlin narrative as articulated through the Office of Communications, Admissions, Development, etc.

3. Because an important way to communicate, recognize, and report on progress is through rankings and awards, the College will continue reporting for Sierra Club Magazine's Cool Schools, Princeton Review's Guide to Green Universities and Colleges, and similar programs.
4. Strive to provide resources and staffing necessary to account for and report carbon production and sustainability tracking for various organizations and commitments. This includes such activities as producing a yearly greenhouse gas inventory, updating the College's Climate Action Plan and creating Progress Reports per ACUPCC requirements, reporting on green power production and purchasing through the EPA Green Power Purchasing Partnership, and updating STARS reports every two years.

Train. Achieving the College's goal of climate neutrality cannot be achieved by technological improvements alone. It also requires that community members receive the following kinds of training:

1. Include education about the College's carbon neutrality commitment, energy conservation and sustainability goals as a component of orientations for students, faculty, and staff.
2. Ensure that staff have adequate expertise to make optimal energy choices in their campus roles. For example, building managers need extensive training in how to operate technologically sophisticated systems; administrative assistants need training in how to minimize energy use of office equipment; students, faculty and staff need training in how to effectively manage plug loads.
3. Employ Community Based Social Marketing techniques to identify the most effective training strategies that will overcome existing barriers to behavior change.

F. Measurement, Verification, and Monitoring

Per the ACUPCC requirements, the Office of Environmental Sustainability records and publicly reports greenhouse gas inventories and carbon neutrality progress, which can be found here: http://rs.acupcc.org/search/?institution_name=oberlin&carnegie_class=%3F%3F&state_or_province=%3F%3F.

To be consistent with national reporting standards, Oberlin College does not currently factor in greenhouse gas emissions of extraction and transportation into our inventory, but we will strive to incorporate this information into our decision-making. In addition to being consistent with our commitment to be moral leaders, this also presents an opportunity for further research and education. The College will consider the full life cycle impacts of extraction, manufacturing and transportation methods on wildlife, landscapes, human health, and human labor practices. We will strive to reevaluate our assumptions and our decisions based on the best available science. We will also work with organizations such as STARS and ACUPCC to expand the accounting of such life cycle impacts in our Scope 3 emissions.

The College is comprised of roughly 100 buildings totaling approximately 2.5 Million square feet. In order to accurately represent and understand our energy use on campus, the College must have consistent metering for steam, electricity, and chilled water systems. Currently the level of building control automation as well as energy use and consumption monitoring and tracking varies greatly from one building to the next. As a result, there is a huge opportunity to not only improve verification but also to identify potential savings by increasing access to clear and accurate real-time energy consumption information.

An enhanced and comprehensive campus-wide Building Automation System, updated and maintained metering technology, and user-friendly monitoring and reporting platform for all respective building

energy resources throughout campus (e.g. power, steam, natural gas, chilled-water, hot water, and waste water systems) could offer much value to Oberlin College. For example, Facilities Operations staff could provide better support to a wide array of old and new building system technologies. The high value yield is a result of recent building system technology advancements in monitoring and tracking energy consumption in conjunction with the growing need to increase energy efficiency practices throughout campus as demanded by the student population as well as our aging building equipment. In addition, there is a growing desire to accurately represent and understand our campus building energy use in real-time reporting among students, faculty, and administrators for easy integration into the curriculum and facility energy use data.

IV. FACILITIES CONSTRUCTION, MODERNIZATION, AND MAINTENANCE

A. Guiding Principles

The way our facilities are constructed, modernized, and maintained has long term implications for Oberlin's environmental impact and carbon footprint. Activities that take place within buildings are responsible for over 90% of the greenhouse gas emissions at Oberlin College. Likewise, the generation and processing of water and waste, including conservation and recycling, takes place within the built environment. Consequently, Oberlin College will strive to program, construct, and operate buildings in ways that maximize energy and material use efficiency, utilize energy generated from renewable sources, effectively manage storm water that falls on buildings, and generally minimize the adverse impacts its operations may have on humans and the natural environment. Oberlin will also strive to maximize the educational opportunities associated with construction, modernization and maintenance of buildings.

To meet these goals, the college will pursue 4 main strategies:

1. Maintain high standards for building construction and modernization. This includes investing in upfront costs of high performance buildings to secure long-term environmental and monetary savings.
2. Pursue integrated design processes.
3. Engage in a rigorous initial and continuous commissioning process.
4. Systematically monitor building performance for both facilities management and educational purposes.

The OES, Facilities Operations, and Facilities, Planning & Construction are charged with ensuring that all practices, procedures, and plans are developed to conform to the principles articulated above. The Vice President of Finance is responsible for providing accurate information about our abilities to meet these goals within realistic budgetary constraints, and working to support these goals within those constraints

B. Current Status

In 2006, the Board of Trustees adopted a policy that all new construction and major renovations be built to at least LEED Silver standard or equivalent, as a tangible action per the ACUPCC. Oberlin College

currently has five LEED certified buildings – the Williams Field House, Kohl Building and Art Museum (Gold), the Apollo Theatre (certified) and Kahn (Silver). This policy was revised and reinforced in 2013 and can be found here.

Oberlin College, to continue being a leader in green building and sustainability, is beginning construction on the Green Arts District (GAD). The District will be a whole city block of green buildings. The Allen Memorial Art Museum and the Apollo Theatre are part of this block. The keystone of the district is the Gateway Building (the Peter B. Lewis Center), a hotel and conference center that will strive to achieve LEED Platinum. The Peter B. Lewis Center broke ground in June 2014 and intends to lead Oberlin College into a new era of green building.

Oberlin has been a pioneer in developing building performance monitoring and feedback technology. In 2000, working with the National Renewable Energy Lab, Oberlin faculty and staff initiated the development of technology for monitoring, archiving and displaying in real-time the environmental performance of the Adam Joseph Lewis Center for Environmental Studies. The extensive and sophisticated system that was developed has proven to be critical for diagnosing performance problems and for improving building performance over time. Oberlin then began developing a "Campus Resource Monitoring System" to monitor electricity and water use in college dormitories. With funding from a series of grants obtained from the U.S. EPA, the Ohio Foundation of Independent Colleges and the Great Lakes Protection Fund, Oberlin expanded the system to include all college dormitories by 2010. Oberlin currently uses "Building Dashboard" and "Building OS" technology -- developed by former Oberlin students working at Lucid Design -- to archive, display and analyze building performance data. Additionally, motion sensors have been installed in offices and dormitories to adjust HVAC and electric usage to actual needs.

Oberlin faculty, staff and students have also pioneered the use of resource reduction competitions among college dormitories and between schools as a mechanism for engaging, educating, motivating and empowering resource conservation. Oberlin played a key role in organizing the first "Campus Conservation Nationals". Hundreds of schools have now participated in this annual resource-reduction competition, which is currently sponsored by the USGBC, the National Wildlife Federation, the Alliance to Save Energy, and Lucid Design Group.

C. Standards for Building Construction and Modernization

The College will pursue the goals articulated above by adopting certain environmental design standards and practices. Although design standards specific to Oberlin College are possible, such standards would require frequent modification to keep pace with changing technology and shifting local circumstances. Accordingly, Oberlin College's standards for building design and construction and the modernization of existing facilities will be those developed by the U. S. Green Building Council and set forth in the LEED (Leadership in Energy and Environmental Design) guidelines; these guidelines can be examined at http:/www.usgbc.org/LEED/index.asp. The LEED standard is the most comprehensive standard available for the design and construction of high performance buildings. Moreover, these standards are scheduled for updating by the USGBC to accommodate advances in the building and materials industries, and energy technology. Additionally, the LEED standard will be expanded and resolved to eventually apply to specific kinds of structures.

College expectations regarding LEED standards will be included in each Request for Proposals. Appropriate College staff will be LEED-trained and certified to provide the necessary in-house expertise to evaluate this input.

The College will strive to maximize the LEED ratings (silver, gold, platinum) achieved for all of its facilities projects.

Building standards, like LEED, and reporting structures like STARS provide the college with a sense of how buildings ought to be constructed and maintained for their inhabitants. However, there are considerable concerns about the ability of these standards to allow the college to maximize innovation, efficiency, conservation and sustainable design practices. LEED standards also do not necessarily provide a system of measurement and tracking of performance over time and do not incorporate mechanisms to provide feedback to building users. Finally, these standards do not take into account behavioral aspects of building use, nor do they include options for instilling behavior change. Therefore, the Facilities, Planning, and Construction (FP&C) and the Office of Environmental Sustainability will pursue the following in-house initiatives:

1. Develop a baseline and track environmental performance of buildings.
2. Develop initiatives for engaging occupants and changing culture.
3. Develop internal strategies and standards to build on top of LEED (instead of replacing LEED) – in order to stimulate creativity and innovation and maximize energy and environmental performance.
4. Continue to observe developments in rating systems to identify suitable alternative programs that can replace or complement LEED.

Overall the College will aim to develop ambitious goals for sustainable practices with a goal to build energy efficient buildings that are durable, easy to maintain and exemplary – in order to continue to be a leader in the area of sustainably-built infrastructure in colleges and universities. Such practices not only accord with the institution's academic mission, they also increase the economy of its physical operations in the long run. A consistently high goal may also increase appeal to potential donors to the College.

D. The Design Process

Achieving high building performance requires an integrated design process from the start. Without appropriate integration, the resulting structures often perform below expectations, and the cost of correction may be high. Design teams will adopt an integrated approach from the onset of the design process and ensure that the components of a building are treated as parts of a unified system. These teams will include building and landscape architects, engineers, day lighting and materials experts, and energy consultants. In addition, design teams shall include representative faculty and student users, as well as College staff who are qualified to understand the systems from design through installation, operation, and maintenance. Experience amply demonstrates that improved building performance can justify the increased costs of "front loading", i.e., can justify the practice of paying more for green compared to more conventional construction, to achieve lower operating costs.

E. Commissioning

Commissioning is an intensive quality assurance process that ensures that a new or renovated building operates as intended and that building staff are prepared to operate and maintain its systems and equipment. To ensure that the College realizes the full environmental and economic benefits of high performance buildings it is imperative that new constructions and major renovations be put through a rigorous commissioning process in which the attainment of design specifications is fully verified. As technologies evolve and become more sophisticated, it is particularly imperative that facilities

management personnel are fully trained in the operation and maintenance of all equipment. Such initial commissioning should occur before final payments to contractors are made.

Commissioning is not a one-time event, however. The College will employ a continuous commissioning process to ensure that its facilities continue to perform as expected. Continuous commissioning requires continuous assessment (see Monitoring, below).

F. Monitoring

Oberlin accepts the adage that, "if it is not monitored then it cannot be adequately managed". Even the best designed and commissioned buildings can underperform due to technological failures or occupant behavior. To realize the full environmental and economic benefits of high performance buildings it is imperative to monitor their performance. Oberlin will strive to increase continuous monitoring of all energy and material flows through the college. To this end, individual buildings will be equipped with sensors that monitor electricity and water consumption and HVAC. Personnel will be assigned roles of continuously reviewing building performance so as to minimize waste and maximize efficiency. Faculty will be encouraged to incorporate the study of resource flows and human dimensions of resource use into their teaching and research where appropriate.

G. Measurement/Verification

The Architectural Review Committee and appropriate Committees of the Oberlin College Board of Trustees will review compliance with LEED standards for new construction and major renovations. These bodies should be expanded to include members with expertise in resource-use technology and LEED standards. The Committee on Environmental Sustainability will receive regular reports on actions taken by the Facilities Office to improve energy-use and water-use efficiencies. The savings that accrue from these efforts can be used to fund additional improvements in facilities performance.

H. Education

Buildings are part of the College's educational apparatus; they instruct about energy and material use and about land and landscapes. High performance buildings can raise awareness about possibilities for reducing environmental impacts, harnessing solar energy, supporting local industries, and promoting biological diversity. All three of Oberlin's overarching educational strategies are relevant to maximizing the impact of our facilities improvements.

Engage, Educate, Empower and Motivate. Data derived from the systems installed to monitor building performance will be displayed to promote awareness of the built environment and its connections with the natural systems that support us. In effect, Oberlin College buildings, to the extent feasible, will serve as laboratories and demonstrations to inform faculty, students, and staff about challenges related to climate change and the current energy economy and how to deal with them responsibly.

Communicate. Strategies for capitalizing on communicating the College's accomplishments in facilities include (but are not limited to):

1. Providing signage in buildings that highlights the sustainability features of the location or implications of its use.

2. Including the College's facilities improvements as an integral part of the Oberlin narrative as articulated through the Office of Communications, Admissions, Development, etc.
3. Continuing to seek national recognition (such as LEED) for new and renovated buildings.

Train. Because high performance buildings (compared to more conventional ones) require greater technological sophistication to understand and operate, it is essential that the individuals who maintain and use these buildings be trained in the appropriate theory and operations.

V. TRANSPORTATION

A. Guiding Principles

Transportation is a prime example of the strong interconnections between the three facets of sustainability -- environmental, economic, and social. For example, walkers and bikers are more connected to the natural environment, have more opportunity for social interaction, increase their physical health, save money on car expenses and gas, and spend more money locally compared to drivers -- all the while emitting less carbon. Over the years, citizens of the United States have become increasingly reliant on vehicles for their day-to-day activities. This development means more parking lots, more pollution, more traffic, and greater consumption of oil (often from foreign sources). This trend not only leads to substantial financial and environmental costs, but also has community and health implications. The College will strive to reverse this trend by encouraging alternative modes of transportation, such as walking, bicycling, and carpooling, and increasing the efficiency of the vehicles that continue to be used.

Currently travel for college business, commuting to work by faculty and staff, and student travel to campus are all included in the College's carbon inventory. Initiatives to alter current patterns of transportation must recognize that each type of transportation and each type of transportation user require special consideration. For example, the College can create directive policies about travel the College pays for, but cannot and should not dictate the personal choices people make while commuting. However, the College can incentivize sustainable choices and disincentivize non-sustainable practices. The College has an interest in doing this because as the College moves toward offsetting all carbon emitted through travel, unsustainable choices made by employees and students will literally cost the college money.

At the same time, transportation strategies must also be sensitive to the needs of people with disabilities; faculty and staff who live far from their workplaces; and visitors, whether they are non-Oberlin residents attending campus events, prospective students and their parents, or visiting scholars and performers.

Since transportation networks cross political boundaries, and since Lorain County has very limited public transportation, the College will work with the City of Oberlin and county, regional, and state entities to promote public transportation in the region. Locally, the college will continue to work with the City of Oberlin to make further progress on Complete Streets[6] policy that requires new and renovated road

[6] *Complete Streets* - A policy guiding transportation planners and engineers to design and operate roadways with *all users* of *all modalities* in mind – including bicyclists, public transportation vehicles and riders, emergency vehicles, people with disabilities, and pedestrians of all ages and abilities. More here: http://www.smartgrowthamerica.org/complete-streets The City of Oberlin passed a resolution adopting Complete Streets in the summer of 2015. The text of the document can be found here: http://destinyhosted.com/oberldocs/2015/CCREG/20150601_508/128_R15-04%20%20Complete%20streets.pdf.

projects to accommodate all users of all modalities.

Envisioning and ultimately re-creating local and regional transportation will not only reduce GHG emissions but will have numerous environmental, social, and economic benefits. Giving people accessible transportation options and "completing our streets" yield a safer, healthier, more economical, more connected, and more vibrant community. To reap the many benefits of alternative transportation, the College will pursue three main strategies:

1. Reduce travel to a minimum.
2. Minimize the environmental impact of travel for activities that cannot be conducted without physically traveling to or from campus.
3. Offset the carbon that results from unavoidable travel.

Currently, transportation issues and services (e.g. biking infrastructure, alternative transportation advocacy, streets construction, student shuttle services, the college's fleet) are decentralized; there is no unified oversight of transportation. Until or unless the College designates a transportation officer, the Office of Environmental Sustainability is charged with developing procedures and programs for transportation in collaboration with all other relevant campus offices and the City of Oberlin. Because the College's efforts to change transportation are in their infancy, this will require considerable staff time. The OES or another appropriate office should receive adequate resources to meet this charge. Involving students in this process as part of their for-credit coursework creates an important educational opportunity and will also help reduce the cost and burden on existing staff.

B. Current Status

Transportation comprises 6.4% of the College's current carbon footprint. Most of the vehicles owned or rented by the College run on fossil fuels. Oberlin College students, faculty, and staff commute and use air travel that contribute to the institution's carbon footprint. To combat fossil fuel vehicle usage, the College has purchased three electric golf carts as well as a hybrid vehicle for Safety and Security. Furthermore, the College boasts a car-sharing program through Enterprise CarShare with three vehicles available to students, faculty/staff, and the Oberlin community at large. The Carbon Management Fund, an offshoot of the Green Edge Fund, is developing locally-based carbon offsetting projects (e.g. campus tree plantings) to offset transportation-related emissions.

In Fall 2013, Oberlin College received a Bike-Friendly College designation at the bronze level with the League of American Bicyclists. The Oberlin College Bike Co-op, the bike share program, and bike racks near all buildings contribute to Oberlin's bike-friendliness. In addition to encouraging walking and biking, many offices on campus are working to make their travel more efficient. For example, the Alumni and Admissions offices have combined regional trips, developed rotation schedules for some locations, traveled with consortiums, and minimized travel through virtual conferencing technology where feasible.

This implementation plan aims to encourage the continuation of these practices and further future sustainability practices like those outlined below.

C. Reduce Travel to A Minimum

Traveling less is the easiest and most cost-effective way to reduce the college's carbon emissions due to travel. It also has financial benefits to the College. There are two important caveats that should guide the use of this strategy, however. First, the College recognizes the irreplaceable value of face-to-face human

interaction; both tangible and intangible benefits accrue from bringing people together. Faculty must attend conferences and travel for research; students gain immeasurably from field trips and athletic competitions; and Development and Admissions personnel must travel to build relationships with donors and future students. Second, the needs and goals of different departments and constituencies will necessitate different approaches for determining what travel is essential for college business. Nevertheless, several key strategies can be deployed in many settings:

1. College personnel will continue to combine/chain trips, to develop rotation schedules, and to pursue consortium travel opportunities where feasible.
2. The environmental cost of a trip will be considered along with other costs and benefits already routinely factored into decisions about travel.
3. The College will continue to provide dedicated space and adequate technical support for teleconferencing. This will allow employees to effectively conduct some college business without leaving campus.
4. The College will continue to rigorously enforce parking regulations. Legal parking on College property by routine users (students, faculty, staff, and regular visitors) should be limited to vehicles registered with Campus Security. This will ensure responsible car use.
5. The College should consider locating personnel (e.g. in Admissions and Development) in high-density parts of the country (California, New York) that require multiple yearly visits.

D. Minimize the Impact of Necessary Travel

Minimizing the Impact of Travel for College Business. Making necessary travel as fuel-efficient and carbon free as possible is an important strategy to save the College money as well as live into its commitments to sustainability and carbon positivity. To that end, the College shall whenever possible:

1. Purchase or rent vehicles that are the least carbon emitting to meet the stated need. This may be achieved through fuel-efficiency, hybrid motors and/or vehicles that run on renewable energy sources. This plan also applies to contracts for vehicles that are rented for long-term use.
2. Develop and enforce an anti-idling policy, to be included in the next revision of this document.
3. Encourage driving rather than flying for destinations close enough to Oberlin to do so (within 5 – 6 hours).

Minimizing the Impact of Faculty, Staff and Student Travel. Because Oberlin is compact and relatively flat, alternative modes of transportation such as biking and walking are a viable source of transportation for many faculty, staff, and students. The College also recognizes, however, that not everyone can bike or walk, due to physical constraints or life circumstances. CBSM research will be employed to determine the most effective strategies for encouraging those who can do so to use alternative modes of transportation. Potential strategies include:

1. Incentivize biking and walking (e.g. through the installation of Complete Streets infrastructure, providing sheltered bike racks and bike repair stations, providing financial or other incentives for faculty and staff to bike, walk or carpool).
2. Create disincentives for driving (e.g. through making parking lot locations less convenient or charging a nominal fee for parking passes).
3. Create, maintain and actively promote programs that assist students in meeting their travel needs without personal cars (e.g. car-sharing programs, supplemental transportation around breaks, shuttle services).

E. Carbon offsetting

Until renewable fuels become widely available, necessary college travel will result in carbon emissions. In order for the College to achieve its goal of being climate positive, it will have to offset carbon emissions resulting from travel.

The American College and University Presidents' Climate Commitment (ACUPCC), to which the College is a signatory, defines a carbon offset as "a reduction or removal of carbon dioxide equivalent (CO_2e) greenhouse gas (GHG) emissions that is used to counterbalance or compensate for ("offset") emissions that is used to counterbalance or compensate for ("offset") emissions from other activities; offset projects reducing GHG emissions outside of an entity's boundary generate credits that can be purchased by that entity to meet its own targets for reducing GHG emissions within its boundary." (ACUPCC, 2008) For carbon offset projects to truly have a meaningful impact on absolute CO_2 emissions, they must be additional, measurable, verified, and permanent. Carbon offsetting should be used as a "last resort," that is, all efforts should first be made to eliminate carbon emissions.

The Office of Environmental Sustainability is currently researching an approach to carbon offsetting to be included in the next revision of this document. Such a policy might include:

1. Maintaining a diverse portfolio of carbon offset projects that includes local projects (so that our community sees the social, economic, and environmental benefits) as well as projects in critical areas around the world (e.g. rainforest preservation).
2. In line with our mission as an educational institution, utilize carbon offsetting as an educational opportunity for students, faculty, staff, and the Oberlin community through teaching and research.

The selection, development and verification of offset projects will require additional staff time Involving students in this process as part of their for-credit coursework creates an important educational opportunity and will also help reduce the cost and burden on existing staff.

F. Education

Engage, Educate, Empower and Motivate. Currently policies, programs and strategies on transportation are not fully fleshed out. Students should be actively and systematically involved in the further development and assessment of these policies and behavior change strategies as an important educational opportunity.

Communicate. Strategies for capitalizing on communicating the College's accomplishments in transportation include (but are not limited to):

1. Provide public signage that highlights the sustainability features of parking and transportation strategies (e.g., clearly label car-share vehicles and electric vehicle charging stations).
2. As new policies and programs are developed, include them as an integral part of the Oberlin narrative as articulated through the Office of Communications, Admissions, Development, etc.
3. Continue to seek national recognition and support for transportation related policies and programs (like the League of American Bicyclist's Bike-Friendly University or Complete Streets Coalition).

Train. Shifting the transportation habits of students, faculty and staff will require the acquisition of new knowledge and skills. The College will seek to:

1. Provide students, faculty and staff with information germane to transportation, including the obligations of persons who bring vehicles to campus, as well as available transportation options for those without cars on campus. This includes information about Complete Streets, alternative modes of transportation such as car-sharing, ride-sharing, bike rentals, bike racks, airport shuttles, and trains.
2. Incorporate education about transportation policies and programs as a component of freshman and new hire orientations.
3. Employ Community Based Social Marketing research to design and implement campaigns for faculty, students, and staff intended to minimize day-to-day and/or single person car use.

G. Measurement

Currently, there is no systematic infrastructure in place to track carbon emissions resulting from travel. To reach our commitment to climate neutrality, the College will need to develop procedures for cataloging carbon emissions resulting from travel for College business, and will need to develop ways to better monitor car use by students, faculty, and staff. The College should measure transportation use beginning with a study of current practice. It should thereafter collect data on the number of students with cars and on the frequency with which students, faculty, and staff use their cars for specific purposes. These surveys should address all of the types of transportation and transportation users listed above and the results be made public.

The College will also need to develop a method of tracking the purchase of carbon offsets as part of its carbon offsetting policy.

VI. GROUNDS

A. Guiding Principles

Oberlin College's outdoor spaces, no less than its classrooms, laboratories, and other teaching facilities, are part of the educational apparatus of the institution. Campus landscapes provide the opportunity to experience nature, venues for physical activity and sporting events, space for rest and relaxation, an outdoor classroom, and a sense of place. The landscape must also provide necessary services such as storm water and traffic management. Hence, the campus grounds should be managed in ways that support the College's values of excellent education and sustainability leadership.

The Oberlin College campus consists of buildings and hardscape – paved areas, sidewalks, stonework, monuments, benches, fencing, bike racks, and the like – embedded in a softscape of about 120 acres of turf and 8 acres of planting beds, as well as meadows, woods, and other lightly maintained areas of about 450 acres for a total of 650 acres. The main campus is home to about 4000 trees, a larger number of plants, and the fauna that inhabit the branches and grounds around them (including the iconic albino squirrels). The Oberlin College Grounds Department, consisting of fewer than ten employees, maintains this landscape and also (in conjunction with the Custodial Department) removes snow and ice in the winter months.

As the 2005 strategic plan states, the College should "work toward environmentally sound as well as aesthetically pleasing means of maintaining the physical plant, the landscape, and their surroundings". The College will strive to maintain the functionality of its landscapes with as much ecological integrity as

possible, recognizing that some kinds of landscapes (e.g. athletic fields, high visibility formal garden beds) require more intensive management practices than others.

To meet the goal stated above, the College will pursue four primary strategies:

1. Minimize inputs, particularly dependence on carbon intensive resources and environmentally harmful chemicals
2. Sequester carbon
3. Promote biodiversity by mimicking and enabling natural systems
4. Foster human interaction with, understanding of, and care for the natural landscape.

Like sustainability in general, the first three strategies are deeply interconnected: Efforts to sequester carbon and mimic natural systems very often result in the reduced need for inputs, and vice versa. Thus we have made no attempt to assign the practices listed below to one of these strategies, but instead present a series of current and future practices that synergistically address all three of these goals.

Facilities Operations – specifically the Grounds and Facilities, Planning, and Construction departments – are charged with ensuring that all practices, procedures, and plans are developed to conform to the principles articulated above.

B. Current Status

The Oberlin College Grounds Department has already implemented a variety of meaningful sustainability practices. The department has devised a low-intensity turf maintenance program that involves low fertility levels, no irrigation, and minimum use of machines for line trimming (weed eating), aeration, and seeding. Oberlin's Grounds Department worked with the City of Oberlin to change ordinances governing grass to allow for natural landscaping; fine-cut turf has been converted to wildflower meadows at eight locations on campus totaling seven acres. Meadowing saves fuel while at the same time increasing biodiversity. Mowing efficiency has also been examined to reduce fuel usage. The Grounds Department uses Integrated Pest Management (IPM) practices to control plant pests and diseases, exploring all available natural strategies before using pesticides. When pesticides are used, the least toxic alternative is used. Campus lawns and plantings are designed and maintained in a natural style. Turf is grown with a tolerance for non-turfgrass species. Plants are placed into environments that match their natural requirements. Pruning, fertilizing, spraying, and mulching are minimized, where possible.

This plan aims to encourage the continuation of these practices and further future sustainability practices like those outlined below.

C. Strategies to Further Reduce Inputs, Sequester Carbon, and Mimic Natural Systems

Softscape Maintenance. The softscape includes all vegetation that is part of the landscape, including turf, trees, ornamental plants, and naturalized areas. The College will continue to use the following strategies to minimize inputs into the softscape:

1. Maintain a low intensity turf maintenance program. Low fertility levels, high mowing height, no irrigation, and minimum use of machines for line trimming (weed eating), aeration, and seeding all help keep fuel use to a minimum. Grounds will also continue to reduce the use of oil and synthetic chemical fertilizers.
2. Compost all organic matter. Grounds shall continue to compost their organic waste from leaf

collection, pruned branches, tree trimmings, and wood chips from tree removals. This compost will be used as mulch in planting beds instead of synthetic chemical fertilizers and purchased mulch.

3. Expand the use of native plants and naturalistic landscaping. Grounds will continue to plant native plants when possible and remove aggressive invasive species and to minimize the acreage that requires high-level maintenance. Where possible, highly managed natural landscapes will be transitioned to land that requires minimal inputs, e.g. replace low-use turf with low-maintenance planting, and replace annuals with perennials.
4. Maintain maximum plant health. Prune plants and perform other required maintenance (e.g. soil aeration, mulch) in ways to promote plant health; this reduces the need for inputs and increases plants' ability to sequester carbon.
5. Utilize Integrated Pest Management (IPM). Integrated Pest Management will be used to manage pests and disease in the most economical means with the least possible hazard to people, property, and the environment. If pesticides and herbicides are necessary, Grounds will strive to use less toxic forms. Even then, all available strategies will be explored before using pesticides. Pest-resistant plants will be used where possible. A strategy of exclusion (closing entry points for squirrels and bats, closing dumpsters for raccoons) and live trap/removal will be used for larger animals.

*Hardscape Maintenance***.** The hardscape includes human-made parts of the landscape, including paved areas, sidewalks, benches and statues. The College will continue to use the following strategies to minimize inputs into the hardscape:

1. Install the most energy-efficient outdoor lighting fixtures and lamps. Efficient lighting directs light to the desired location in a focused way, and minimizes light pollution. This will not only save money and reduce carbon emissions, but also help the College achieve Dark Sky Compliance. The use of efficient, long-lasting bulbs results in less staff time spent on changing bulbs and decreased exposure to potentially dangerous conditions on lifts and ladders.

2. Minimize the acreage of paved areas and sidewalks. Maximizing planted areas sequesters carbon and replenishes groundwater. The College will strive to utilize permeable pavements for any additions and repaving projects.

3. Build and maintain a low-maintenance hardscape. Grounds will seek to use low-polluting and long-lasting paints and coatings wherever possible, and to use environmentally benign practices and materials to control ice. A priority will be put on purchasing long-lasting, high-quality pieces (e.g. bike racks and outdoor furniture) to maximize the useful life of these products.

Active Water Management. Water gardens shall be maintained as natural aquatic ecosystems. For example, floating plants can be added to the water surface in spring to provide shade and consume nutrients in the water. Bioswales and porous pavement will be incorporated into new constructions to decrease run-off and erosion. The College will also seek to:

1. Increase the number of rain gardens on campus.
2. Install green roofs where practicable.
3. Improve drainage to promote plant health and keep traffic areas dry.
4. Collect rainwater for later use in irrigation.

Equipment. To maximize efficiency and minimize carbon emissions, existing equipment will be replaced whenever possible with machinery that is more fuel-efficient and that can be powered by sustainable energy sources such as waste vegetable oil. Tools and equipment will be carefully maintained for high

fuel efficiency to reduce GHG emissions and for long life to reduce landfill waste.

D. Foster Human Interaction with, Understanding of and Care for the Natural Landscape

It is important to provide green spaces with various levels of active management in order to foster interaction with natural spaces, nurture care for green spaces, and demonstrate respect for such spaces. The College will use the following strategies to promote human interaction with the landscape:

1. Reserve some spaces, such as Tappan Square and Wilder Bowl as green spaces uses for human recreational activities, congregating, and events.
2. Manage some spaces to serve their natural purpose, but allow humans to interact and engage with them, like the Arboretum.
3. Other spaces should be managed without the consideration of human use for the space, like meadows.

E. Education

Engage, Educate, Empower and Motivate. The College can pursue the following strategies to maximize the grounds as an educational tool:

1. Engage faculty and students with grounds personnel to take advantage of teaching and research opportunities associated with landscape ecology and grounds management.
2. Engage knowledgeable faculty and appropriate community members as resources to effectively manage our landscapes.
3. Effectively communicate plans and actions that improve campus grounds sustainability. For example, provide explanatory signage for plants and plant communities in high-visibility areas indicating why certain plants and landscapes were chosen - especially when converting from higher-maintenance to lower-maintenance natural land areas.

Communicate. Strategies for capitalizing on communicating the College's accomplishments in grounds maintenance include (but are not limited to):

1. Include the College's sustainable grounds management practices as an integral part of the Oberlin narrative as articulated through the Office of Communications, Admissions, Development, etc.
2. Provide explanatory signage for plants and landscapes in high-visibility areas indicating why certain plants and landscapes were chosen - especially when converting from higher-maintenance to lower-maintenance natural land areas.

Train. Because sustainable grounds management may often differ from common practice and is continually evolving, it is essential that the grounds staff be regularly trained in best practices of sustainable grounds maintenance.

F. Measurement

The Grounds department will make biannual reports to the Committee on Environmental Sustainability covering at least the following topics:

1. Use of fossil fuels, supplying the information needed for OES (or others) to compute GHG

emissions from use of grounds' fuels.
2. Use of waste oil, volume of composting, supply of brush and wood chips to others as fuel, acreage of plants, supplying the information needed to compute GHG offset estimates.
3. Renovated and new landscapes. Acreage with no input and minimal input.
4. Chemicals and water use.
5. Education and community outreach programs.
6. Efforts to promote carbon sequestration in trees and soil.
7. Other new programs and initiatives.

VII. PURCHASING, REUSE AND DISPOSAL

A. Guiding Principles

In order to operate a vibrant institution of 2900 students, 1000+ faculty and staff, an art museum, sports teams, and music conservatory, Oberlin College purchases and discards many products that have significant social, economic and environmental impacts. As a leader in higher education and a large institution in the region, the College has the opportunity and responsibility to handle purchasing, reuse and disposal in a way that advances the College's achievement of environmental sustainability.

The College recognizes that the purchase and disposal of materials are inseparable: purchasing something entails a commitment to disposing of or reusing it in a responsible way. Ideally all waste would be eliminated; that is, material byproducts from one process would become useful inputs for other processes. The College will strive to achieve this end, but acknowledges the difficulty inherent in eliminating all waste in a highly consumer culture; the College must work internally as well as with producers and suppliers to push towards a zero-waste society.

To move towards zero waste, the College will pursue four primary strategies:

1. Reduce consumption on all dimensions (e.g. the number of products purchased, the resources consumed to produce the product, and the amount of mileage/carbon required to get products to Oberlin).
2. Reuse as much as possible as efficiently as possible.
3. Recycle items that cannot be reused such that materials are separated and returned back into useful production (for example, through recycling of paper and plastics or through composting).
4. Leverage the College's relationship with vendors to promote sustainable products and practices more broadly.

Together, these strategies will help the College to meet "zero waste" guidelines by 2050. Zero waste is defined as diverting at least 90% of materials from the landfill through reusing, recycling, and composting. Because products available and the practices of other organizations often constrain the College's ability to pursue this objective, the College must simultaneously push for changes in the larger society.

Purchasing is an activity that is distributed across many entities on campus. The purchasing department is charged with overseeing the College's purchasing practices and ensuring that all practices, procedures, and plans are developed to conform to the principles articulated above. The Office of Environmental Sustainability and the Purchasing Office will have a student intern devoted to reviewing life cycle analysis and possible alternatives of highly-bought items, educating P-Card holders, and working to

further develop the sustainability of Oberlin College's purchasing. Facilities Operations, Facilities, Planning, and Construction (FP&C), and the Resource Conservation Team (RCT) are responsible for additional material purchasing, reuse, and disposal and must also conform to the procedures stated herein.

B. Current Status

Oberlin College strives to adhere to the 3 R's: reduce, reuse, recycle. To reduce the amount of materials that we purchase, the amount of packaging and transportation they require, the College created a Green Purchasing policy to assist the College in implementing the purchasing section of the Environmental Policy. The Green Purchasing policy details strategies to further the College's purchasing goals and lists desirable environmental attributes to enable purchasers to consider the impacts of various products and a variety of ways to purchase more sustainably. The Green Purchasing policy is meant to supplement the Environmental Policy and Implementation Plan as a living document that can be updated frequently as new research, products, and certifications are available. The Green Purchasing policy can be found here: http://new.oberlin.edu/dotAsset/5467041.pdf. In seeking to implement sustainable purchasing initiatives, the Office of Environmental Sustainability partnered with the Purchasing Office to create a joint Sustainable Purchasing Intern position. Primary tasks of this intern are to perform research on the sustainability of products and services Oberlin utilizes and educate purchasers.

The Oberlin College Purchasing and Auxiliary Services and Computer Information Technology (CIT) departments (two of the largest purchasers on campus) have already implemented a variety of sustainability practices. Staples, the College's primary office supply provider, directs users to select green products over conventional ones as they are browsing and placing orders online. The College has worked with Staples to consolidate and reduce frequency of deliveries to the College in order to save money and fuel. The Purchasing Office began offering credit cards or purchase cards ("p cards") to employees, which has reduced paper use significantly. CIT also boasts a number of green practices, including reusing and refurbishing computers whenever possible, buying Energy Star and EPEAT-certified machines, and utilizing recycled-content paper. The Telephone office reuses and recycles devices and when purchasing new devices selects those with greatest battery life.

The Resource Conservation Team (RCT), a group of students that work with Facilities Operations, manage an array of programs to promote material reduction, reuse, and recycling. Among their programming, the RCT runs the Free Store, a store of materials ready for a new home; a residential compost program for dorms and village housing residents; the Little and Big Swaps, move-out collections and distributions at the end of the semester and end of the year, respectively. The RCT also manages a garden at the Johnson House, performs periodic waste audits on campus, and works with Facilities Operations and OES to improve the resource efficiency of the College.

The College utilizes the City of Oberlin to pick up our recyclables and landfill waste. As of spring 2013, the College is able to recycle plastics #1-7, aluminum cans, glass, paper, cardboard, and cartons; see more here. For the ease of users, all materials can be "co-mingled" -- thrown into the same bin -- for recycling. Efforts to increase recycling participation and decrease contamination in recycling have been spearheaded by RCT, Facilities Operations, and OES. This has included educational signage, tabling at popular locations on campus, and purchasing and installing new waste station bins with coupled signage in trial buildings. Tracking of recyclables and landfill waste has proved to be challenging, and requires continued effort on the part of the City and the College.

Oberlin College has a long history of progressively leading sustainable dining initiatives. Oberlin College banned bottled water, formed a socially responsible purchasing committee, and aligned with forward-thinking vendors before many of these initiatives were common practice. Oberlin College selected Bon

Appetit Management Company in 2001 to become our food service provider. Unlike other companies at the time, Bon Appetit was familiar with and interested in securing local, humane, and sustainable foods.

In 2013, the College signed the Real Food Challenge, pledging to purchase 40% "real food" by 2020. The Real Food Challenge defines "real food" as local, sustainable, fair, or humane[7]. Campus Dining Services employs a group of students to work on student-initiated sustainability projects within dining. This group, the CDS Recyclers, works on a variety of projects from the Go More Meatless campaign, to food rescue, to the reusable mug program. The CDS Recyclers have furthered composting efforts, initiated the Dascomb Reusable Container program, and oversee the Real Food Challenge.

This Plan calls for the continuation of these practices and further future sustainability practices like those outlined below.

C. Reduce

Reducing the number of products purchased, fuel consumed, packaging discarded etc. has both economic and environmental benefits, and is the first strategy to be pursued. Strategies for reducing the College's consumption include (but are not limited to):

1. Examine all purchases as to whether the purchase is absolutely necessary; can similar items be reused from elsewhere on campus, or can the task be achieved some other way?
2. When purchases are necessary, employ total product "life-cycle analysis" and "full cost accounting" to evaluate products. Life-cycle analysis is accomplished by considering the origin and fate of a material or service. Full-cost accounting reveals the environmental costs of its extraction, manufacture, transportation and disposal that may not be fully reflected in its market price. This task will require staff time and expertise.
3. Based on life cycle analysis and full cost accounting, select materials that minimize environmental costs and maximize environmental benefits on campus and beyond. This means favoring materials that have minimal packaging, are recycled or reusable, sustainably harvested, non-toxic and biodegradable, and/or energy-efficient.
4. Favor local products, when possible, to gain a variety of environmental and economic benefits. For example, favoring locally grown foods minimizes fossil fuel use for transportation and at the same time helps sustain farmland and economy, and maintenance of a local destination for composted food waste.
5. Minimize products containing known toxins where viable substitutes are available. Refer to Green Purchasing policy for specifics.

D. Reuse

The College frequently has items to dispose of that are no longer sufficient for the purpose at the college, but still retain value that makes them useful to others. Although the College does maintain an off-site storage facility for some of these items, currently many useful items wind up in the landfill. The strategies below would help to minimize this source of waste on campus, but will require additional staff time to execute:

[7] A single food only needs to meet one of these standards to be defined as "real." More information about the challenge: http://www.realfoodchallenge.org/ Article about Oberlin signing the commitment: https://oncampus.oberlin.edu/source/articles/2013/03/17/krislov-signs-real-food-campus-commitment

1. Maintain an on-campus facility to inventory and manage reusable materials.
2. Make arrangements (e.g., annual public sales, donations to nonprofits) that responsibly take advantage of the large and varied collection of durables (e.g., furniture, consumer electronics) regularly abandoned by students at the end of every school year. Recovered bicycles should be triaged, scrapped, and salvaged appropriately. This might include selling the scrap metal and parts and fixing salvaged bicycles and donating or selling them to the community in order to encourage accessible, alternative transportation.
3. Strive to maximize the useful life of all purchases, and downcycle materials when possible. For example, state-of-of-the-art computer equipment is necessary for a variety of educational and administrative tasks and, as a result, equipment is often replaced well before its useful life is over. Strive to reuse older computers for less demanding applications on campus and attempt to sell or donate computer equipment when it is no longer useful to the College.

E. Recycle

Recycling materials should occur only when efforts to reduce and reuse have been maximized. To promote the responsible and useful disposal of waste material the College will:

1. Employ Community Based Social Marketing research to develop effective strategies for encouraging recycling among all community members.
2. Maintain convenient and complete recycling service across campus to make recycling of paper, plastic, glass and metal as simple as possible.
3. Maintain services for recycling common hazardous wastes (such as batteries, toxic chemicals) wherever possible. Seek to identify vendors who can recycle hazardous wastes from products that the College cannot avoid purchasing such as unused paints and spent solvents. Manage all hazardous materials to minimize adverse effects on human health and the environment.
4. Treat wastes destined for landfills in ways that minimize the potential for negative effects following burial.

F. Leverage relationships with vendors

The College can increase the likelihood that it will be able to achieve the goals outlined in this section by proactively working with vendors to promote sustainable practices and products. The College will favor vendors with demonstrated expertise in and commitment to sustainability and resource use efficiency. Specifically, the College will wherever possible:

1. Convey in writing its goals for source reduction and will encourage vendors to help us achieve these goals. This document will emphasize the institution's adherence to 'total product life-cycle analysis' leading to closed-loop scenarios in product development, design, packaging, shipping, and the return of products for recycling, reuse and remanufacturing.
2. Work with other area institutions to increase its leveraging and buying power. This has the potential to expand access to sustainable products as well as create monetary savings.
3. Instruct vendors to notify buying staff of all of the environmentally sensitive products or services that they provide and plan to provide.
4. Favor "Products of Service" when available. This arrangement allows the consumer to purchase the service of a product while the manufacturer retains material ownership of that product[8]. It creates an economic incentive for the manufacturer to produce durable products that provide

[8] http://www.unep.org/resourceefficiency/Portals/24147/scp/design/pdf/pss-imp-7.pdf

valuable services to the customer. (For example, the College rents washers and dryer for laundry services and the provider owns the machines).

5. Minimize the generation of materials destined for landfills or incineration, and seek relationships with waste vendors that help the College achieve this goal by developing cooperative mechanisms to audit, monitor, and reduce waste streams.

G. Campus Dining, Food, and Compost

As a residential campus, Oberlin College houses and feeds the vast majority of students. Oberlin's dining halls are not just a place to eat, socialize, and do homework; our dining operations have great potential to impact the sustainability, health, and well-being of the campus and the broader community. Food impacts sustainability throughout its whole life cycle from production to transportation to how it is served to how it is disposed of. The College will continue sustainable dining efforts through the following practices:

Campus Dining.

1. Increase the procurement of local foods -- locally grown, manufactured, or processed -- within 150 miles.
2. Increase the amount of "real food" as defined by the Real Food Campus Commitment as sustainable and eco-friendly, fair-trade, humane, and local seeking to secure 40% by 2020.
3. Offer wholesome vegetarian and vegan foods.
4. Strive to offer healthful foods to the campus.
5. Minimize the environmental impact of dining services through utilization of energy-efficient appliances, trayless dining, favoring reusable containers and utensils over disposable ones, etc.
6. Continue enforcing the ban on bottled water. Consider spreading this ban to flavored waters, etc.

Organic Waste. The College will strive to minimize the amount of materials sent to landfills through recycling and composting. Organic waste may include pre-and post-consumer food and napkins, yard-waste, as well as compostable utensils, plates, and containers. As such, the College will seek to collect organic waste where possible for composting. To achieve this end, the College will:

1. Utilize a multitude of partnerships and strategies (i.e. a commercial facility that handles post-consumer food and paper and utensil products, as well as local farms to compost pre-consumer food waste) as required.
2. Support the infrastructure and operational requirements to collect food waste; this might include bins, signage, staff to collect materials, and transportation.
3. Encourage the development of a composting facility, either on or off campus, and institute policy that mandates the composting of as much food waste as possible from College dining halls and co-ops.
4. Investigate the possibilities for collective efforts with the City of Oberlin and other local institutions.

H. Reporting Metrics

All waste must be tracked and recorded as best as possible by the City of Oberlin and/or Facilities Operations. This data should be reported to the Office of Environmental Sustainability each year. Together the purchasing and sustainability offices must monitor purchasing, disposal and recycling activities to improve these aspects of the College. The creation of a transparent and public system for accounting and monitoring implementation of the Environmental Policy and this plan also increases the

opportunity for students to engage in the process as an educational opportunity.

I. Education

Oberlin College's purchasing policy will succeed only to the extent that students, faculty, staff, and the larger community with which it interacts embrace the goals outlined here during day-to-day decision-making. To create buying and disposal habits consistent with this plan, the College will maintain the following educational efforts:

Engage, Educate, Empower and Motivate. Because conducting life cycle analyses and full cost accounting requires time and expertise, the Office of Environmental Sustainability and the Procurement Office will hire a student purchasing intern who will report to both Purchasing and OES. This intern's duties include: reviewing departmental and college purchasing, researching products, seeking and offering sustainable alternatives, educating P-Card holders on green purchasing, and updating the Green Purchasing Policy accordingly.

Communicate. The College will seek to make its sustainable purchasing and disposal practices visible through the following strategies:

1. Where appropriate, indicate or clearly label the sustainable features of purchased products (e.g., by including "printed on recycled paper" on printed material).
2. Include the College's sustainable purchasing practices as an integral part of the Oberlin narrative as articulated through the Office of Communications, Admissions, Development, etc.

Train. Providing community members with the knowledge and skills required to implement this plan is absolutely essential to its success. To this end, the College will:

1. Regularly maintain and actively distribute the Green Purchasing Policy as an up-to-date, user-friendly resource that provides specific recommendations about products and materials most commonly purchased at the College.
2. Include information about purchasing policies, recycling and reuse programs during first year and new employee orientations.
3. Build awareness of the sustainable procurement policy and standards through information dissemination and incorporation into regular staff training.
4. Provide regular training programs tailored to match the particular responsibilities of faculty, staff and students that explain both implementation objectives and specific practices relevant to their duties. For instance, administrative assistants in each department will receive instruction on purchasing and resource conservation practices relevant to office management, while custodial staff will receive instruction on environmentally sensitive material use and disposal. Faculty will receive instruction on minimizing waste resulting from classroom instruction.
5. Maintain clear and engaging signage throughout the institution that explains how to properly dispose of recyclables, hazardous waste, and compostables.

VIII. IMPLEMENTATION

A. Guiding Principles

Good policies are most likely to succeed when executed by dedicated individuals well versed in the principles that underlie those policies. Oberlin College's environmental policy implementation will succeed only to the extent that students, faculty, staff, and the larger community with which it interacts adopt a culture of environmental stewardship. In order to implement the strategies outlined in this document, the College must educate the individuals responsible for its operations and actively encourage the culture necessary to achieve compliance across the campus community. To this end, the College commits to adopting 5 primary implementation strategies:

1. Institutionalized leadership
2. Communication and education
3. Systems of accountability
4. Participation in sustainability networks
5. Regular review and revision of this plan

B. Institutionalized Leadership

Building and maintaining a sustainable community in the face of changing realities and a revolving student body will require continuous monitoring, effort and community engagement. Leadership on sustainability issues will be institutionalized in three important ways:

The Office of Environmental Sustainability. New technologies and solutions to environmental challenges are constantly emerging, and require the assistance of professional staff. The Office of Environmental Sustainability, in collaboration with appropriate faculty, staff, and students, is charged with implementing the Environmental Policy. As such, OES will:

1. Track and report sustainability progress by participating in AASHE's STARS and adhering to ACUPCC reporting commitments.
2. Develop and implement short- and long-range strategies, objectives, policies, and practices related to sustainability programming and initiatives to further progress on and engagement with sustainability issues. This includes hiring and overseeing student interns to assist in the implementation of sustainability initiatives.
3. Monitor sustainability progress using institutional commitments and guidance documents, like the Environmental Policy and implementation plan, and provide mentorship to student groups and others. OES also monitors progress using higher-education industry resources.
4. Communicate sustainability progress by maintaining an up-to-date website, social media pages, and publishing relevant articles.
5. Provide leadership planning and development that inspire environmental sustainability practices for energy innovation; and foster partnership opportunities within Oberlin and other local institutions, organizations, officials, outside agencies and the community.
6. Develop and maintain good working relationships with local, state, and federal energy organizations and agencies.

The Committee on Environmental Sustainability. This is a standing faculty committee charged with overseeing the development and implementation of environmental policy. The Committee will support and communicate with the Office of Environmental Sustainability in multiple ways, including:

1. Suggest ways to improve policy and practice and solicit proposals from the campus community for the same purposes.
2. Provide input for sustainability reports, review such reports, and present the information contained to the greater College community and peer institutions.
3. Ensure that the implementation recommendations laid out in this document and in future

documents are approved and adopted by the necessary agents.
4. Advocate for the needs of the Office of Sustainability, and for all sustainability efforts on campus
5. Actively engage the Oberlin College community in sustainability initiatives.

Board of Trustees. Leadership at the Board of Trustees level and coordination with on-campus efforts is essential for the implementation of this plan. The Board could pursue several possible mechanisms for promoting leadership and collaboration, including:

1. Incorporate sustainability concerns into the regular decision-making processes of standing committees.
2. Include the Environmental Policy and Implementation Plan as a topic in the orientation for new Board members
3. Appoint one or more Board members to serve as liaisons to the Committee on Environmental Sustainability..

C. Education

Sustainability literate students, faculty, staff, administrators, alumni, and trustees are crucial to the goals articulated in this document. What follows are the most important overarching strategies for implementation. More topic-specific strategies can be found in each section of this plan.

Engage, Educate, Empower and Motivate.

1. New students will be informed about environmental imperatives and related College responsibilities and policies during pre-enrollment orientation.
2. New members of the faculty and staff will receive similar orientation with regard to Oberlin College's sustainability commitments as well as their role in Oberlin's sustainability.
3. Feedback about resource use will be maintained and made publicly available (via digital displays, environmental orbs, mock utility bills) whenever feasible. This information will also be posted on the College's Energy Dashboard.
4. Environmental sustainability will be integrated broadly throughout the curriculum, where appropriate.

Communicate.

1. The Office of Environmental Sustainability and the Committee on Environmental Sustainability will make regular reports to the General Faculty, College Faculty, and Conservatory Faculty.
2. The Office of Environmental Sustainability will publicly report on progress towards carbon neutrality and environmental sustainability through standard recognized procedures (.e.g, greenhouse gas inventory, progress reports per ACUPCC, STARS).
3. Sustainability will continue to be an integral part of the Oberlin narrative (as articulated through the Office of Communications, Admissions, Development and anyone else that represents the Oberlin brand).
4. Wherever possible, environmental sustainability efforts across campus will be labeled and explicated through user-friendly signage or other documentation.

Train.

1. Ongoing education of students, faculty and staff will occur through information sessions on compliance with College environmental implementation plan when appropriate (for example

when individuals receive a college purchasing card, they will be educated about purchasing policy), through the Green Room and Green Office programs, Ecolympics, and through lectures and events held throughout the year.
2. Relevant staff should receive professional development and training opportunities as required by their role to stay up-to-date on the latest sustainability best practices and to ensure the College's compliance with sustainability standards.
3. Behavior change programs should be designed using proven and effective methods (e.g., using Community Based Social Marketing) and routinely deployed to raise awareness and promote positive behavior regarding College environmental policy implementation.

D. Accountability

Accountability is an essential component of policy implementation. It also provides the opportunity for feedback on sections of implementation that are not working, the identification of issues that require further resources for successful implementation, and an opportunity for further education. The following mechanisms can help ensure that the College continues to move forward towards its sustainability goals:

Department Reports. The Committee on Environmental Sustainability will meet regularly (approximately every two years) with department heads (e.g. Human Resources, Purchasing) who are responsible for implementing sections of the plan. Department heads will present their current sustainability initiatives and challenges to CES. The committee will provide feedback to the department head on how they can better adhere to the Plan or go beyond it, receive feedback on implementation and potential ways in which it could be improved, and when appropriate advocate for additional resources or policy changes needed to achieve these goals.

Reporting Metrics. Oberlin accepts the principle that, "if it is not adequately monitored then it can not be adequately managed". The College commits to employing a suite of key indicators in compliance with ACUPCC and STARS to be posted publicly on these websites and linked from the College sustainability site. College performance in all of these categories should be verifiable and compared against appropriate benchmarks, and should inform college practice and policy. Reports like ACUPCC and STARS include such indicators as:

> *Energy*: Energy use identified by type (electricity, heating, cooling) and fuel type (wind, solar, natural gas) for every building amenable to breakout and the relationships of energy use to CO_2 and other GHG emissions.
>
> *Transportation*: Miles-per-gallon of the College's vehicle fleet and numbers of vehicles preferably by type, both those owned and rented by the College; estimated GHG emissions from commuting and a summary of transportation initiatives (including Complete Streets, incentives for active transportation, carpooling, etc. per above).
>
> *Grounds*: Fertilizers, pesticides and fuels used; percentage of campus square footage maintained without pesticides and chemical fertilizers and percentages maintained with minimal inputs of these substances.
>
> *Materials Use*: Amount of glass, paper, aluminum, etc. recycled as a percentage of those materials consumed; percentage of all paper purchased that has recycled content; total water use; total volume of waste sent to landfills.

Curriculum: Classes that involve sustainability components, sustainability-related co-curricular opportunities and experiences, and sustainability-related academic research and assess to this research.

Planning and Coordination: Strategic plan including sustainability, policies including sustainability, diversity and affordability initiatives, support for underrepresented groups, employee compensation, programs encouraging health and wellbeing at work, socially responsible investment practices, and more.

The College will:

1. Complete the STARS report every two to three years.
2. Conduct ACUPCC reports as recommended; including a greenhouse gas inventory each year and progress reports every two years.
3. Informed by performance on these metrics, address shortfalls through changes in procedures and revision of the Environmental Policy and implementation plan.

Awards. To encourage and reward outstanding sustainability efforts across campus the Office of Environmental Sustainability will pursue sustainability awards administered by external organizations, and support the efforts of faculty, students and staff in applying for these awards. The Office of Environmental Sustainability will also seek to encourage positive behavior in individuals and departments by developing an internal award program.

E. Participation in sustainability networks

Organizations and institutions dedicated to environmental sustainability and conservation are valuable sources of information and advice, and Oberlin College policymakers should take advantage of this resource. Moreover, colleges and universities with similar buying practices can form purchasing consortia for green power, recycled paper, etc. as well as "sharing consortia" to facilitate the reuse of office equipment, building materials, etc. Oberlin College will seek to:

1. Participate in nationally or internationally recognized programs and organizations, such as AASHE.
2. Collaborate with the City of Oberlin and with other educational institutions to help effect its environmental policies.
3. Bring expert individuals and advisory groups to campus for consultation with appropriate sustainability staff.
4. Be represented at national and regional conferences and events to share best practices and facilitate collaboration amongst other institutions and advocacy organizations.

F. Regular Review and Revision of the Environmental Policy Implementation Plan

As Oberlin College and the larger world continue to change, our understanding of sustainability will continue to change and evolve rapidly. In order for this Plan to remain a timely and effective guide to campus decision-makers, it must be regularly reviewed and revised as appropriate. This Plan will be reviewed at least every three years by the Committee on Environmental Sustainability, but may be reviewed more often if deemed necessary.