

OBERLIN COLLEGE ENVIRONMENTAL POLICY

AUGUST 2003

This document was prepared by members of the Environmental Policy Advisory Committee (EPAC) during the course of academic years 2001-02 and 2002-03. EPAC members are listed at the end of the document.

Our report begins with The Environmental Policy Statement for Oberlin College. This brief statement outlines the general principles that should govern all activities on campus; it should be included in the College mission statement and be displayed on the College website. Recommendations specific to certain College activities on campus follow. The section on energy production and use comes first because of its implications for the entire campus. The subsequent four sections outline policies for grounds (landscaping), buildings, transportation, and materials in that order. The final section enumerates the steps that we deem necessary to successfully implement the proposed policy.

Choices of verbs (e.g., strive versus seek), verb tenses (e.g., will versus should), and modifiers vary among the specific actions recommended for inclusion within College environmental policy. These choices reflect our conviction that realistic and effective policy must encompass many kinds of actions some of which are worthy of and suitable for immediate implementation. The others will be less time-sensitive imperatives or initiatives best viewed as desirable goals depending on degree of urgency, practicality, and other important considerations. In short, the individuals who use this document to craft official College environmental policy will have to determine the suitability of each of our recommendations and how the items accepted should be presented in that document.

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Environmental Policy Statement for Oberlin College

(ADOPTED BY BOARD OF TRUSTEES, MARCH 2004)

The core mission of Oberlin College is the education of its students. One aspect of such education is the demonstration by its actions of the College's concern for, and protection of its physical environment.

Oberlin College must be a responsible steward of the environment. As such, the College will seek 1) to reduce the rate at which it contributes to the depletion and degradation of natural resources; 2) to increase the use of renewable resources; and 3) to consider other measures that can enhance the physical environment in which we live. The development of priorities and the implementation of decisions regarding energy production and use, the use and development of our grounds, facilities construction, modernization, maintenance, transportation, and materials use will be informed by the environmental impact they have. The President or delegated officials will periodically advise the community of the College's progress in this area.

I. Energy Production and Use

A. General policy statement

Energy transformation and use release a variety of environmental pollutants with local, regional, and global impacts. Fossil fuels, particularly coal, are especially problematic. The principal impacts associated with fossil fuel use are the release of CO₂ and other pollutants into the atmosphere. Scientific consensus posits that humans have already added enough CO₂ to the atmosphere to cause climate change, including elevated land surface temperatures and more frequent extreme weather events. Should CO₂ continue to accumulate in the atmosphere, these conditions are expected to intensify.

Among fossil fuels, the burning of natural gas (CH₄) produces the least amount of CO₂ per unit of energy released. Oil (CH₂) is next, and coal (CH) is most carbon- (CO₂) intensive and also a major source of polluting SO₂, reactive nitrogen, and certain toxic metals like mercury. The carbon in fossil fuels becomes CO₂ and the hydrogen becomes H₂O. Many experts predict that hydrogen gas (H₂), which upon combustion generates no CO₂, will become the major stored and distributed source of convertible energy in the not-too-distant future. Sources of "green" (nonpolluting) energy include solar, hydroelectric, geothermal, and wind. Wind and solar energy are the best candidates for use in northeastern Ohio and could replace fossil fuels if emerging policies, technologies, public demand make them sufficiently cost-effective.

As an institution of higher education, Oberlin College has a special obligation to be proactive and responsible in its management of energy. Consequently, it will pursue two long-term goals. Specifically, the College will substantially reduce energy use and will achieve "carbon neutrality", a condition whereby the release of CO₂ and other greenhouse gases through all activities associated with College operations is balanced by other activities that remove carbon from the atmosphere. Carbon neutrality on a planetary scale is essential to stabilize global climate, and its achievement is one of the greatest challenges to the survival of human-kind as we know it.

Responsible energy management requires that environmental costs be considered along with operational costs. Environmental impacts must be evaluated, and the attendant costs considered in decisions regarding campus energy use. The College recognizes that sometimes a monetary premium is required to achieve important environmental benefits. In the broadest sense, Oberlin College seeks to implement aggressive strategies that reduce energy use, increase the efficiencies of electricity and heat production and consumption, and shift the institution towards use of less polluting sources of energy. 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 long-range planning and large capital investments.

Numerous energy conservation practices are spelled out in the sections of this report that deal with buildings, transportation, grounds, and materials. What follows immediately below is a general description of the current status, approaches, and policy recommendations for energy management.

B. Status of facilities and energy use

Oberlin College is nearly 100% reliant on fossil fuels, mostly on coal for energy, in large part because a coal-fired heating plant (with supplemental use of natural gas at transitional times of the year) is used to meet most of its heating requirements. A small amount of natural gas provides space and water heating at some local sites. Likewise, a small amount of electricity produced in-house through cogeneration supplements the much larger amount of electricity purchased from Oberlin Municipal Light and Power (OMLP). OMLP obtains most of its electricity (~90%) from coal-fired power plants¹. Finally, the college owns or rents many vehicles most of which run on fossil fuels.

C. Reducing energy consumption

Since Facilities Resource Management assumed responsibility for campus operations in July 1998, fossil fuel use (excluding the new Science Center load) has decreased by 16%. Room for substantial additional improvement remains, however. The College will achieve greater energy reductions by improving the thermal efficiencies of buildings and the operating efficiencies of equipment, and by instituting creative policies and educational initiatives that encourage students, faculty, and staff to use less energy. Buildings and activities within buildings (plug loads) currently account for more than 90% of the energy consumed on campus. Efforts should therefore be focused on building renovation and on the selection of appliances that minimize energy use (see the section on buildings).

Incentives designed to encourage students, faculty, and staff to purchase and manage personal electronic equipment to minimize energy use should be pursued as well.

D. Increasing efficiency and decreasing the environmental costs of energy production and distribution

Minimizing pollution associated with energy production will be accomplished through a twofold approach that focuses on increasing the efficiency of energy use and distribution and lessens reliance on pollution-intensive fuels, especially coal².

E. Education

The strong link between energy use and environmental quality provides an ideal opportunity to engage and educate Oberlin students, staff, and the rest of the community in efforts to reduce energy use and promote the desired shift to renewable sources. The College must be conspicuously proactive about making improvements. This initiative requires that the College:

1. Include energy conservation education as a component of freshman orientation.
2. Provide students with a conduit for making suggestions for enhancing campus energy-use-efficiency and adopt those that are feasible.
3. Engage students in the process of designating policies and educational campaigns to increase energy-use efficiency.
4. Inform students about environmental improvements made by the College.

F. Specific recommendations

1. An individual within Facilities Planning should be assigned primary responsibility and provided the time necessary to oversee the training of certain College employees and conduct comprehensive and continuous monitoring and assessment of both energy performance and policy efficacy. Monitoring will be conducted to establish baselines and include regular measurements of energy use with the Rocky Mountain Institute spreadsheets and report thereby serving as points of departure³. This individual will report to the administration and be advised by a designated group of staff, faculty, and students (EPAC) with expertise in energy issues, including environmental impacts. An annual report will be produced that assesses progress and identifies opportunities for further improvement in energy management.
2. Given the pollution caused by burning coal, Oberlin's coal-fired steam plant should be replaced as soon as resources allow. A comprehensive study will be commissioned to assess the best available technology for replacing Oberlin College's existing coal-fired plant with a facility that incorporates higher capacity for cogeneration and meets campus heating and cooling needs cleanly and efficiently.
3. Oberlin should seek to engage in collaborative efforts with other colleges that share our goal of reducing dependence on fossil fuels.
4. The College should engage with OMLP to coordinate decisions regarding electrical energy production and encourage a shift from coal-fired power to less polluting or renewable energy sources such as natural gas, solar, and wind. The College will

investigate opportunities to purchase a significant fraction of the energy it needs from renewables through OMLP.

II. Grounds

A. General Policy Statement

Urban landscapes address aesthetic sensitivities and more mundane issues like storm water and traffic management; they also articulate the values of people and institutions and so are instructive. Educational institutions like Oberlin College should strive to illustrate how these disparate purposes and functions can be integrated in ways that assure that built landscapes are practical, healthful for body and soul, and levy no unnecessary burdens on our planet. In essence, such spaces should foster a sense of place and the realization that nature welcomes our presence everywhere if we manage these encounters wisely.

Because built landscapes take many forms and must provide many services, opportunities to use them to demonstrate responsible use of natural resources vary. Even the most intensively managed sites--those that require substantial inputs of pesticides, nutrients, and human labor--can be managed to emulate nature more faithfully than conventional practices allow. Many circumstances determine whether a given landscape can be more or less consistent with the principles of sustainability. Determining which practices to apply to specific sites requires that we consider priorities and compromise appropriately.

Oberlin College maintains about 650 acres of land, approximately 200 of which are intensively managed. Spaces such as athletic fields and beds of

bulbs and annuals present substantial challenges to sustainable practices. However, most of the central campus and all of the 450 acres that receive less regular maintenance can be managed to promote biodiversity, sequester large amounts of carbon, and reduce the likelihood of introductions of invasive plants into adjacent natural habitats. The entire campus can be maintained in ways that minimize or eliminate dependence on nonrenewable energy sources and environmentally harmful chemicals.

Oberlin College's landscape, no less than its classrooms, laboratories, and other teaching facilities, is part of the educational apparatus of the institution. Hence, the campus grounds should be managed in ways that accord with the College's efforts to provide its students the tools they need to become responsible world citizens.

Institution of the practices and principles listed below will help the College align the message that we indirectly voice through our landscape with the call for responsibility that we so pointedly celebrate through our formal curriculum.

B. Further reduce dependence on chemicals in accordance with the principles of Integrated Pest Management (IPM)

1. Expand reliance on cultural practices (e.g., soil aeration, high cutting length) that improve the health of turf short of applying fertilizers and pesticides.
2. Landscape with pest-resistant horticultural material and native flora whenever possible.
3. Substitute compost for chemical fertilizers and purchased mulch and employ additional organic methods whenever practical.

4. Reduce the use of pesticides (fungicides, herbicides, and insecticides) to applications consistent with the principles of IPM.
5. Substitute sand or less toxic salts for sodium chloride to control ice and help reduce corrosion on equipment where feasible.

C. Utilize equipment and strategies that reduce reliance on fossil fuels

1. Replace existing equipment with machinery powered by other means than gasoline and diesel fuel.
2. Increase the extent of low-input plantings to replace turf.

D. Develop electronic databases and maps that help manage the campus landscape in an environmentally sustainable and efficient fashion

1. Employ Computer assisted design technology (CAD) to promote ecologically sound practices for maintaining existing plantings and to plan new ones.
2. Use this CAD-mediated database to expand efforts to create native landscapes/communities and remove exotics where practical.
3. Use this database to partition the campus into zones distinguished by acceptable levels of chemical and energy use and choice of plant materials.

E. Involve the Oberlin community in grounds installations and management whenever practical

1. Expand the “dig-ins” to allow greater opportunity to involve all Oberlin community members in the campus landscape and inform them about the principles of ecological sustainability.

2. Label plants and plant communities in high-visibility areas indicating why certain plants were chosen.
3. Expand the student summer-internship program.
4. Create a course for undergraduates on grounds management.
5. Reestablish a Campus Landscape Advisory Group that includes faculty to serve as a resource for the Grounds Department and the College Administration.

F. Remain apprised of developments that allow improvements on the techniques and principles listed above

G. Ensure that all plans submitted for new and renovated landscapes conform to the principles and practices articulated above

A campus body, perhaps most appropriately the Architectural Review Committee, will examine all plans to assure compliance with grounds policy. That evaluating body will assure that it has timely input from persons familiar with grounds technology, perhaps obtained by consulting with members of the Campus Landscape Advisory Group.

III. Facilities Construction, Modernization and Maintenance

A. General Policy Statement

Facilities construction, modernization, and maintenance must be considered in any campus-wide environmental plan. Consequently, Oberlin College will strive to program, construct, and operate buildings in ways that maximize resource-use efficiency, utilize energy generated from renewable sources, manage storm water effectively, and generally minimize the adverse impacts that certain of its operations may have on humans and the natural environment.

B. Standards for Building Construction and Modernization

The College will pursue the goals articulated in the preceding paragraph 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.

The LEED standard will be used flexibly for the construction of new buildings and the modernization of existing ones. College expectations regarding LEED standards will be included in each Request for Proposals, along with milestone dates for periodic review of compliance. Responses from architects will include the LEED checklist (see appendix) and a range of possible scores and associated economic costs. 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. Adherence to high goals

should apply even when financial constraints are significant because such practice accords with the institution's academic mission and will increase the economy of its physical operations. A consistently high goal may also increase appeal to potential contributors.

C. The Design Process

Design errors typically occur early in the design process and principally because architects, engineers, and clients fail to treat the components of a building as parts of a unified system. Without appropriate integration, the resulting structures often perform below expectations, and the cost of correction may be high. Therefore, design teams charged to integrate building components will conduct the program and design phases for all Oberlin building projects. These teams will include building and landscape architects, engineers, day lighting and materials experts, energy consultants, staff charged with operation and maintenance, and representative faculty and student users. 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.

D. Monitoring/Information

The College will systematically monitor, review, and improve end-use efficiencies for the consumption of electrical and thermal (heating and cooling) energy and water across campus. To this end, individual buildings will be equipped with sensors that monitor electricity and water consumption and HVAC. Additionally, motion sensors will be installed in offices and dormitories to adjust HVAC and electric usages to actual needs.

E. Oversight

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 General Faculty Planning Committee will receive regular reports on actions taken by the Facilities Office to improve energy-use and water-use efficiencies. A budget line will be established to use the savings that accrue from these efforts to fund additional improvements in facilities performance.

F. Materials and Maintenance

The College will seek to identify, and where possible, eliminate materials of known toxicity used in construction, maintenance, and operations and minimize the use of any other products that may threaten health. The College will institute procedures to accomplish these goals according to recommendations from a Materials Safety Group that will consist of appropriate facilities staff, faculty, and students.

G. Materials Reuse/Recycling

The College will seek arrangements that allow it to inventory and store for eventual reuse, items such as furniture and reusable building materials salvaged from renovations or left unused during new construction. This arrangement will include establishment of an adequately-sized and managed storage facility for such materials. Planning for new building projects will include a mandatory review of all salvage on hand in order to reduce purchases of new materials. Salvaged materials with value, but no foreseeable utility on campus, will be sold or donated to other users.

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. For these reasons, data derived from the systems installed to monitor building performance will be displayed to promote awareness of the built environment and its connections with nature. 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.

Because high performance buildings compared to more conventional ones require greater technological sophistication to understand and operate, we recommend that the individuals who maintain and use them be trained in the appropriate theory and operations.

IV. Transportation

A. General Policy Statement

Over the years, Oberlin students, faculty, and staff have become increasingly reliant on cars for their day-to-day activities. This development has reduced the quality of life on and around Oberlin's campus through the attendant growth of centrally located parking lots and increased traffic. More importantly, it has also reinforced an increasingly troublesome culture of environmental disregard. College transportation policy should therefore be formulated to reverse this trend by encouraging alternative modes of transportation, such as bicycles, and increasing the efficiency of the vehicles that continue to be used. The strong link between transportation use and

environmental quality provides an ideal opportunity to educate Oberlin students, faculty, and staff about environmental responsibility.

To meet the goal stated above, the College should adopt policies that favor on-campus pedestrians and bicycles and discourage vehicles except when they carry visitors, persons with disabilities, or are engaged in emergencies, deliveries, or maintenance. Viable alternatives to cars already exist for on-campus activities, for transportation between the campus and the city of Oberlin, and between the campus and more distant venues in Northern Ohio (e.g. the airport, Cleveland), and they should be more fully utilized.

Attempts to alter current patterns of transportation use need to recognize that each type of transportation and each type of transportation user requires special consideration. Policy must, for example, be sensitive to the disparate needs of students who live off campus, faculty and staff who live far from their workplaces, and individuals who drive College vehicles as part of their jobs. College parking policy must also be crafted to assure a welcoming environment for visitors be they non-Oberlin residents attending campus performances, perspective students and their parents, and so on.

Further, the College should demonstrate the wisdom of purchasing and/or renting fuel-efficient or alternative fuel vehicles. This leadership should extend beyond the College's own fleet of vehicles to involve incentives formulated to influence the purchasing habits of students, faculty, and staff. More specific guidelines for meeting these objectives are listed below.

A. Parking and Enforcement

1. The College will adjust its parking policy to reduce non-essential car use. Some of these adjustments will require consultation with appropriate Oberlin City officials.

2. The College will seek to avoid building more central parking lots and explore alternatives. For example, the College might consider building convenient remote lots, with permeable surfaces, on College land to accommodate travel to and from campus. Adding such lots might create opportunities to reduce the number of existing parking spaces on campus.
3. The College will develop ways to better monitor car use by students, faculty, and staff.
4. Existing parking regulations will be rigorously enforced.
5. Legal parking on College property by routine users (students, faculty, staff, and regular visitors) will be limited to vehicles registered with Campus Security. Student registration is particularly imperative. Possible methods to improve compliance include:
 - a. Asking students living in campus housing to sign a statement at the start of every year academic year indicating whether they have brought a car to Oberlin.
 - b. Requiring students living off-campus to register their cars if they routinely park them on college property.
 - c. Require other regular users of Oberlin facilities, such as people with recreation passes for the fitness center, to register their vehicles and issue them parking passes.

B. Encouraging the use of efficient vehicles and alternative modes of transportation

1. The College should adopt policy whenever possible whereby the vehicles it rents or purchases are fuel-efficient, hybrids, or

- run by energy from renewable sources. This policy should include contracts for vehicles that are rented for long-term use.
2. The College should adopt policies that encourage car-use changes among students, including, but not necessarily limited to those suggested below:
 - a. Programs that encourage students with cars to bring fuel-efficient or alternative fuel cars to campus. Color-coded parking stickers designed to send a powerful symbolic message about College values could be used.
 - b. Policies that assist students meet their travel needs without personal cars. For example:
 - i. The current policy whereby students can rent cars through the College could be expanded to permit easy and inexpensive rentals for non-college functions.
 - ii. Programs that provide supplemental transportation around breaks could be developed, including a bus rental program to provide transportation to and from major destinations such as Boston, Chicago, New York City, and Washington, D.C.
 3. The College should also consider arrangements that alter the car-use habits of faculty and staff. These options include:
 - a. Developing a program that encourages faculty and staff to purchase fuel-efficient or alternative-fuel cars.
 - b. Developing an incentive system that facilitates and encourages carpooling.

4. The College will strive to maintain a safe and convenient environment for bicycle-users, and will facilitate and encourage bicycle use. To this end, the College could:
 - a. Build covered bicycle storage areas in convenient locations across campus.
 - b. Consider adding bicycle lanes on roads.
 - c. Develop an incentive system to encourage faculty to commute.

D. Measurement

The College should measure transportation use beginning with a study of current practice. It should thereafter maintain records of 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.

E. Consultation

In order to design and implement successful and environmentally responsible transportation policies, the College will need to consult with the relevant City of Oberlin Officials. For example, the establishment of bicycle lanes and/or road signs reminding drivers to share the road with bicyclists might be explored.

F. Education

- a. The College will incorporate education about transportation policies as a component of freshman orientation. For example, orientation could include trips that teach students how to use LCT (Lorain County Transit) and the College car rental option.
- b. The College will engage students in design and implementation of campaigns intended to minimize day-to-day car use.

- c. The College will provide students with information germane to transportation, and especially the obligations of persons who bring vehicles to campus.

V. Materials, Purchasing, Reuse and Disposal

A. General Policy Statement

Oberlin College purchases many products that it consumes or uses, and in the second instance, eventually exports or discards. The College's decision to conduct business in an environmentally responsible fashion mandates that all of these activities be pursued in ways consistent with the policy outlined in this document. Moreover, the College recognizes that the purchase and disposal of materials are inseparable and linked with how materials are used on campus. Consequently, it seeks solutions that simultaneously address all aspects of resource use.

Sustainability is achieved in part by eliminating the concept of waste, which means that material byproducts from one process become useful inputs for other processes (i.e., material loops are closed). The three-R's of resource-use efficiency—reduce, reuse, and recycle—are paramount to College policy. In fact, Oberlin College seeks to exceed existing regional, national, and international goals regarding the safe use of materials and material-use efficiency. Nothing less would be defensible for a leading institution of higher learning.

B. General Policy Objectives

1. Minimize consumption by using materials as efficiently as possible and for as long as possible, i.e., maximize the useful life of materials.
2. Select materials that minimize environmental costs and maximize environmental benefits on campus and beyond. This means favoring materials that are recycled or reusable, sustainably harvested, and non-toxic and biodegradable, and energy-efficient in the sense of a low energy-demand appliance.
3. Effect objectives one and two by using total product “life-cycle analysis” and “full cost accounting”. 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, and disposal that may not be fully reflected in its market price.
4. Favor local products to gain a variety of environmental benefits. For example, favoring locally grown foods minimizes fossil fuel use for transportation and at the same time helps sustain farmland and economy. Encouraging sustainable local agriculture will also provide a destination for the College’s composted food waste.
5. Develop and, if possible, collaborate with others to develop infrastructure that facilitates all of the goals itemized above. Central to this effort is the establishment on campus of a facility to inventory and manage reusable materials.
6. Educate students, faculty, staff, and the vendors from whom the College purchases materials and services about strategies that promote resource-use efficiency.

7. Seek arrangements with the City of Oberlin and other nearby institutions that help promote the goals articulated above.
8. Monitor purchasing, disposal and recycling activities.
9. Continuously update policy to insure that the objectives articulated in the College's environmental policy on purchasing, reuse and disposal are accomplished.
10. Make it easy for all members of the Oberlin community to comply with College policy on purchases, reuse and disposal (e.g., inform them about where to dispose of items such as spent batteries and obsolete equipment).

C. Relationship with Vendors

The College will favor vendors with demonstrated expertise and commitment to high resource-use efficiency. This policy increases the likelihood that the College will be able to achieve the goals outlined in this document by increasing its opportunity to:

1. Communicate environmental procurement strategy to vendors. Specifically, the College will 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. Minimize packaging and use only recyclable packaging.
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. It creates an economic incentive for the manufacturer to produce durable products that can easily be remanufactured.

5. Favor energy-use-efficient products.
6. When possible, purchase reusable or used products.
7. Favor materials with high-recycled content if comparable in utility to products composed of virgin materials.
8. Minimize the generation of materials destined for landfills or incineration. Seek relationships with waste vendors that help the College achieve this goal by developing cooperative mechanisms to audit, monitor, and reduce waste streams.

D. Materials Inputs

1. City water
 - a. Minimize water use by promptly repairing leaks and installing water-saving devices such as low-volume showerheads.
 - b. Seek out and demonstrate in selected buildings engaging water-saving technology such as gray water systems. Encourage a culture of water conservation. For instance, post signs in the gym and dorms with tips on how to save water.
 - c. Campus landscape strategies that can reduce demand are described in the Grounds section of this document.

2. Rainwater

Develop policy that takes maximum advantage of this resource, for example, the practice of storing and using rainwater to irrigate landscape vegetation.

3. Consumable office supplies

Favor materials with high recycled content.

4. Student durables

Establish 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. Salvageable bicycles should be donated to the Oberlin Bicycle Coop to encourage environmentally sensitive transportation.

5. Office equipment

Favor energy-use-efficient appliances. Select printers and copiers capable of making double-sided copies and set double-sided copying as the default mode. Select equipment capable of handling paper with a high-recycled content.

6. Durable goods

- a. Purchase appliances that use water and energy efficiently (e.g., washer, dryers, refrigerators).
- b. Favor wood products from forests certified as sustainably managed.

7. Food and food service

- a. Favor local products.
- b. Where possible, favor farms that follow sustainable land-use practices.
- c. Minimize the use of disposable containers and utensils by food service.

E. Material Outputs

1. Wastewater

Wastewater production can best be minimized through conservation measures that reduce fresh water use. Installations, such as gray water systems, are mentioned in the section on inputs.

2. Storm water

Description of what constitutes storm water management are provided in the LEED specifications described in the Facilities sections of this document.

3. Organic wastes (food waste, yard waste)

Encourage the development of a composting facility, either on or off campus, and institute policy that mandates the composting of all food waste from College dining halls. Investigate the possibilities for collective efforts with the City of Oberlin and other local institutions.

4. Other wastes (glass, plastic, etc.)

Recycle as much of these materials as possible.

5. Locally “downcyclable” wastes

Strive to maximize the useful life of all of the products it uses, for example, the additional use of single-sided printing paper as scratch paper.

6. Computers

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.

7. Hazardous wastes (biohazards, toxic chemicals, batteries)

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.

8. Solids for landfill

Treat wastes destined for landfills in ways that minimize the potential for negative effects following burial.

9. Facility for managing reusables

Seek ways to collect, store and manage reusable materials (e.g., furniture, construction materials) on campus (see Facilities sections).

F. Education

Oberlin College's environmental policy will succeed only to the extent that students, faculty, staff, and the larger community with which it interacts adopt a culture of environmental stewardship. Education that fosters this culture will be accomplished through continuous campus-wide education on material use, specifically via:

1. Freshman orientation materials and organized discussions designed to promote and demonstrate the institution's goal of "closing the loop" in material cycles.
2. Training programs tailored to match the particular responsibilities and expertise of staff that explain both policy 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.

3. Signage throughout the institution that explains objectives as well as underlying policy. Such signage should be updated to provide the College community with feedback on achievements and goals. Recycling barrels, for example, might display statistics on the percentage of solid waste the institution has recently recycled.
4. Policy that encourages faculty members to maximize material-use efficiency in the classroom.
5. Policy that encourages collaborative research and perhaps courses involving faculty, students, staff, and vendors on new ways in which the institution might increase resource-use efficiency. For instance, managers of existing internal funding programs, such as the Mellon Assistantship program, would be encouraged to solicit and fund scholarship on this topic.
6. Assistance to the larger community, including local schools and civic organizations, to develop and implement policies that promote resource-use efficiency.
7. Creation of a transparent and public system for accounting and monitoring policy implementation so that students and other community members can more easily engage in and assess the process.

VI. Implementation

A. Preamble

Good policies are most likely to succeed when executed by dedicated individuals well versed in the principles that underlie those policies. In order to implement the policies contained in this document, the College must therefore educate the individuals responsible for its operations and actively encourage the culture necessary to achieve compliance across the campus community. To this end, the Environmental Policy Advisory Committee (EPAC) recommends that the College proceed by adopting the measures described below.

B. Commit to Campus-wide Environmental Education

Environmentally literate students, faculty, staff, administrators, alumni, and trustees are crucial to the goals articulated in this document. What follows are educational initiatives intended to promote effective environmental stewardship.

1. New students will be informed about environmental imperatives and related College responsibilities and policies during pre-enrollment orientation. They will also be taught about the ecology of the Northern Ohio Region. Appropriate literature will be distributed to support this process.
2. New members of the faculty and staff will receive similar orientation.
3. Faculty and staff from time to time will be invited to information sessions on compliance with College environmental policy.
4. Pamphlets, signs, and surveys will be used to raise awareness and promote positive behavior regarding College environmental policy.
5. Real-time computer displays and/or biannual postings about water use and energy use and production will be maintained

where feasible. This information will also be posted on the College website.

C. Assemble an Annual Report of Key Indicators and Conduct Retrospectives

Progress cannot be measured without baselines, beginning with those variables that are most amenable to accurate assessment. The EPAC therefore recommends that a suite of key indicators be assembled annually and posted on the Oberlin College website. College performance in all of these categories should be verifiable and compared against appropriate benchmarks. Indicators that belong in such a report should include:

1. Energy: energy use identified by type (electricity, heating, cooling) for every building amenable to breakout and the relationships of energy use to CO₂ and other GHG emissions.
2. 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.
3. 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.

4. Materials Use: Amount of glass, paper, aluminum, etc. recycled as percentage of those materials consumed; percentage of all paper purchased that has recycled content; total water use; total volume of waste sent to landfills.

Every two years following adoption of its environment policy, the College will assess its progress and identify any shortfalls and announce how it intends to rectify them.

D. Designate a Staff Position for Environmental Policy Implementation

A person with appropriate expertise will oversee the day-to-day implementation of environmental policy and seek arrangements with other colleges and universities, environmental organizations, and the City of Oberlin that can help the College achieve the goals described below. A technical advisory group consisting of on- and off-campus ad-hoc consultants and staff will be assembled to provide this person assistance.

Specific job responsibilities could include:

1. Coordinate on-campus environmental education programs as described in Section VI-B.
2. Set up arrangements for monitoring, as described in Section VI-C.
3. Lead the writing of the annual and periodic reports on progress made in meeting goals in the environmental area, as described in Section VI-C.

4. Be an active conduit for bringing information about new ways and new technologies for environmental action to the attention of appropriate persons on campus.
5. Be a member of EPAC and advise other standing committees on environmental policy.
6. Represent the College in negotiations with other groups, such as the City of Oberlin, area colleges, and national bodies, as described in Section in Section V-E.
7. Coordinate the College's recycling program.
8. Coordinate transportation policy as it intersects with environmental concerns.

E. Network with Peer Institutions and Environmental Advisory Groups

Organizations and institutions dedicated to environmental sustainability and conservation are valuable sources of information and advice, and Oberlin College policymakers should take greater 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. Consequently, the EPAC recommends that:

1. The College join a nationally or internationally recognized voluntary action program such as the World Wildlife Fund's Climate Savers program.
2. The College collaborate with the City of Oberlin and with other educational institutions to help effect its environmental policies.
3. The College bring expert individuals and advisory groups to campus for consultation with the EPAC and the environmental oversight staff member as needed.

F. The Continuing Role of the EPAC

Policy priorities, guidelines, and adjustments should continue to be set by representatives of the administration, faculty, student body, facilities operations department, and the City of Oberlin and possibly others. The EPAC, therefore, will be a permanent standing committee and charged to:

1. Suggest ways to improve policy and practice and solicit proposals from the campus community for the same purposes.
2. Provide input for the annual environmental report, review that report, and present the information contained in that report 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. Compose the biannual evaluative "report card" mentioned above on the success of campus environmental policy.

G. Funding Opportunities

Many of the goals set out in this document can be accomplished within the existing administrative structure at Oberlin College. However, without designation of personnel specifically charged with implementation of this

policy the pace will be slow and the costs likely higher than necessary. Furthermore, slow implementation threatens to further erode Oberlin's established leadership position on the environment. With these concerns in mind, the EPAC recommends that the College actively seek new outside funding to support the position of an environmental manager and to make possible proactive steps, such as converting the heating plant from coal to gas-fired, producing electricity by combined cycle operation, implementing campus-wide composting, and switching to hybrid motor vehicles.

EPAC MEMBERS

NAME		TENURE ⁴
Baumann, Fran	Oberlin Community Representative	3, 4
Benzing, David	Faculty, Biology	1, 2, 3, 4
Craig, Norm	Faculty, Chemistry, Emeritus	1, 2, 3, 4
Evans, Andrew	Administration - Finance	1, 2, 3, 4
Filardi, Sal ⁵	Facilities Planning & Construction	1, 2, 3, 4
French, Rebecca	Student - 2004	2, 3, 4
Gaudin, Sylvestre	Faculty - Economics	1, 2, 3, 4
Gerber, Carl	Alumn – Former EPA	1, 2, 3, 4
Jahns, Claire	Student - 2003	1, 2, 3, 4
Morgenstern, Richard	Alumn – Resources for the Future	1, 2
Orr, David ⁶	Faculty – ENV5	1, 2, 4
Petersen, John	Faculty – ENV5	1, 2, 3, 4
Schildkraut, Debbie	Faculty – Politics	1, 2, 3, 4
Skinner, Bill ⁷	Faculty – Geology – Emeritus	1, 2, 3, 4
Turner, Caroline	Student – 2004	2, 3, 4

¹ The local OMLP plant is gas-fired but is only run occasionally to offset the high costs of peak loads. OMLP has a stake in a hydroelectric project in West Virginia and is actively exploring participation in wind generation in Northern Ohio. OMLP currently purchases methane-generated electricity from the BFI landfill site.

² An electrostatic precipitator, recently refitted, reduces particulate emissions to a low level but does not remove most of the sulfur oxides or reduce CO₂ emissions.

³ Committee members studied the 2020 Report produced by the Rocky Mountain Institute and used its content as background for their deliberations.

⁴ Fall 2001=1, Spring 2002=2, Fall 2003=3, Spring 2003=4

⁵ Co chair, Fall 2002

⁶ Chair Fall 2001, Fall 2002, and Spring 2003

⁷ Chair Spring 2003