

Taking Steps Toward Sustainability in Higher Education in Northeast Ohio:

Developing Prototype Assessment and Benchmarking Tools and Campus Sustainability Guidelines

**Funded by the Northeast Ohio Research Consortium
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Prepared by

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Part I

What Higher Education is doing to Prepare for a Sustainable Future

An abundance of evidence exists, supported by the scientific community, that the way we meet the needs of modern society is not just and sustainable long term. We are wasteful of natural resources and enjoy standard of living too dependent on limiting that of populations elsewhere in the world. Whether in our own communities, or around the world, our future is threatened because, in many ways, it is not sustainable.

Institutions of higher education (HEI's) are assuming a leadership role in addressing a major future need—to create a sustainable future for the community in which they are located, and the world at large. A leadership role begins with an institution-wide effort to shape its vision, mission and goals to explicitly to educate tomorrow's knowledge workers about the importance of achieving a sustainable future in all aspects of life, and to become a sustainable institution in policy and practice.

What is the evidence of how universities and colleges have taken explicit steps to play a leadership role to ensure a sustainable future? This project, funded by NEORC, has surveyed numerous reports and documents in order to develop a conceptual framework for understanding what institutions can and are doing, and to construct useful tools for use by NEORC member institutions to assess what already is occurring within their institutions, as well as to evaluate options they have for doing more.

Focus of this Project

Universities are economic engines for their respective regions. They are among the largest employers and purchasers of goods and services and they are in communities for the long-term. The project team has developed a comprehensive approach to aid universities in evaluating their options and strategies for sustainability.

This project is focused on providing universities with tools for assessment to assume a leadership role in shaping a sustainable regional and global future, and a means of identifying the sustainability resources available on campuses that can be shared and made available to policymakers and communities.

Project Overview:

The three universities, Cleveland State University (CSU), Kent State University Urban Design Center of Northeast Ohio (KSU/UDC), and Youngstown State University (YSU), involved in *Taking Steps Toward Sustainability* have developed prototype tools to assist local universities in evaluating a broad-based view of sustainable practices as an institution, and as a member of local and global communities.

The results of this work are:

- “A Dynamic Model of Sustainable Higher Education Institutions” developed by YSU
- A draft “University Sustainability Assessment Tool” produced by YSU
- A flexible follow-up “Tracking Tool” created by CSU that is intended to be a quick visual indicator of how the university is attempting to reach its own goals and to

- what degree it is contributing to the sustainability goals of the communities and regions in which it is located.
- A prototype “Campus Sustainability Standards” manual developed by KSU/UDC, using the YSU campus as a frame of reference, and intended to assist other universities in understanding how to incorporate principles of good stewardship into campus projects.
 - Finally, we are planning a forum at the CSU Levin College for late winter/early spring and are planning on having a key speaker; we’ll introduce via powerpoint all of the above pieces, and have a response panel.

In Part I, we begin with a discussion of what is meant by sustainability and a just and sustainable future. Rather than using a narrow definition, we adopt a broad view of a sustainable future. Next, we present a dynamic model depicting how a college or university, as an institution, can integrate sustainability initiatives throughout the institution as a center of learning and as an organization. The conceptual framework presented in this section is drawn from an abundance of literature. Finally, a conceptual system, based on the work of Anthony Cortese and the University Leaders for a Sustainable Future’s Sustainability Assessment Questionnaire, categorizes institutional objectives to address sustainability issues in education, research, and community engagement, and in campus operations. Examples are provided within each category based on the literature survey.

Defining Sustainability

We begin with a discussion of what is meant by sustainability and a just and sustainable future. Rather than using a narrow definition, we adopt a broad view of a sustainable future.

The word sustainability is typically interpreted in the context of environmental practices. Here, though, we are looking at a broader view to include not only natural systems, but also built communities and social systems. Tied to sustainability in this larger context are the practices of sustainable development, stewardship, smart growth, sustainable consumption, and social justice.

- **Sustainable development** is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. – Brundtland Commission (United Nations). 1987
- **Stewardship** is the conducting, supervising, or managing of something; especially: the careful and responsible management of something entrusted to one’s care; “stewardship of our natural resources.” Merriam- Webster Dictionary
- **Smart growth** is development that serves the economy, the community and the environment. It changes the terms of the development debate away from the traditional growth/no-growth question to “how and where new development should be accommodated?” Smart growth is development that simultaneously achieves: US EPA “What is Smart Growth?” from Smart Growth Fact Sheet, EPA 231-F-01-001A
 - ✓ **Economic development and jobs**—create employment and business opportunities, improves local tax base, provides neighborhood services and amenities, and creates economically competitive communities.

- ✓ **Strong neighborhoods**—provide a range of housing options, giving people the opportunity to choose housing that best suits them. Smart growth provides the choice to walk, ride a bike, take transit, or drive. It maintains and enhances the value of existing neighborhoods and creates a sense of community.
 - ✓ **Healthy communities**—provide families with a clean environment. Smart growth balances development and environmental protection—accommodating growth while preserving open space and critical habitat, reusing land, and protecting water supplies and air quality.
- **Sustainable consumption/lifestyles** and ways of working are central to overcoming poverty and conserving and protecting the natural resource base for all forms of life. Sustainable methods of production are needed in agriculture, forestry, fishing and manufacturing. Use of resources need to be minimized, and pollution and waste reduced.

Indeed there is a need to reduce the impacts of lifestyle consumption habits on society and resources to ensure equitable availability of resources for all around the world. Education and training for sustainable production and consumption play an important role in achieving this by creating a more critical and responsible attitude towards consumerism in our everyday lives.
UNESCO (United Nations Educational, Scientific and Cultural Organization)

- **Social Justice** addresses equitable access to resources and the benefits derived from them; a system that recognizes inalienable rights and adheres to what is fair, honest, and moral.
McGraw-Hill Online Learning Center

In this larger context of sustainability, issues that might seem peripheral come to center stage. For example, HISTORIC PRESERVATION is a main principle in SMART GROWTH and capitalizes on already-existing community assets. The consequences are sustainable: historic preservation of key landmarks and neighborhoods strengthens older cities, preserves a unique sense of place, improves the image of the city, invites people to move back (which curbs outer ring development), creates jobs and economic development, and so on—and simultaneously honors past and future generations.

Establishing a LIVING WAGE is an example of SOCIAL JUSTICE. The results would create healthier and more secure families, increased homeownership (thus, creating more caretaking of houses), which would have positive impacts on neighborhoods, especially in inner cities. Further, as those neighborhoods strengthen, the image of the community is enhanced, real estate values rise, tax base grows, the local economy develops.

A campus master plan that implements SUSTAINABLE DEVELOPMENT by adapting or creating GREEN BUILDINGS provides an exemplary model for students to observe and use as part of their studies, saves the university energy and money, vicariously educates surrounding communities and governmental bodies, and provides opportunities for gardens and green space within or on top of buildings.

In summary, for many institutions, the primary focus has been on environmental sustainability and environmental justice. Individual institutions or systems can decide their own definition based on what is determined to be most important.

Model Initiatives of Higher Education and Sustainability

Next, we present a dynamic model depicting how a college or university, as an institution, can integrate sustainability initiatives throughout the institution as a center of learning and as an organization. The conceptual framework presented in this section is drawn from an abundance of literature.

Finally, a conceptual system, based on the work of Anthony Cortese and the University Leaders for a Sustainable Future's Sustainability Assessment Questionnaire, categorizes institutional objectives to address sustainability issues in education, research, and community engagement, and in campus operations. Examples are provided within each category based on the literature survey.

Institutions of higher education rarely are doing all of these things; certainly not all in exemplary ways. Each institution or system has its own unique circumstances that shape the nature and quality of initiatives they undertake. An institution can work to model some elements and not others. For example, some universities work in a more insular fashion in establishing institutional goals and objectives designed to assert its leadership in helping to prepare future workers, consumers, researchers, etc. needed to achieve a sustainable future; rarely do these institutions undertake these initiatives in partnership with external stakeholders. In other cases, the institution is focused on assisting its home community with a sustainable future—environmental sustainability, sustainable development, and/or social justice, for example.

Is there institutional commitment—the first step?

Every institution likely can identify specific academic, research or outreach units that explicitly reference sustainable development, environmental justice, smart growth, or social justice, etc. Certainly, curriculum and projects will include a number that address these themes. While these efforts flourish, they are likely the result of the interests and initiatives of individual faculty, staff or directors, etc. They do not represent an explicit intent by the institution to play a leadership role. There is no assurance that current efforts are 'sustainable'.

Institutions of higher education have been slow to embrace a leadership role, as an institution, to advocate for a sustainable future. As late as 2002, major studies¹ revealed little evidence of institutions of higher education “yet to broadly address this most pressing of issues.”²

*Higher education institutions bear a profound, moral responsibility to increase the awareness, knowledge, skills, and values needed to create a just and sustainable future.*³

¹ Michael Shriberg, *Sustainability in U.S. Higher Education: Organizational Factors Influencing Campus Environmental Performance and Leadership*, Ph.D. Dissertation. University of Michigan: <http://sitemaker.umich.edu/snre-student-mshriber/files/shriberg.pdf>; Tarah Wright, “A Review of Definitions and Frameworks for Sustainability in Higher Education” *International Journal of Sustainability in Higher Education*, 2002

² Harold Glasser, “Murky Grades on Campus Sustainability: A Survey Reveals Widespread Unwillingness to Make the Environment a High Priority”, *Association of Governing Boards Trusteeship*, Vol 10, March-April, 2002, pp 34-35.

³ Anthony Cortese, “The Critical Role of Higher Education in Creating a Sustainable Future”, *Planning for Higher Education*, 2002, p. 17.

They are uniquely positioned to do so since they prepare the leaders, entrepreneurs, workers, and consumers of tomorrow.

Higher education has unique academic freedom and the critical mass and diversity of skills to develop new ideas, to comment on society and its challenges, and to engage in bold experimentation in sustainable living.

[What if] all professionals understand their connections to the natural world and to other humans. What if people truly know where products and services come from, know where wastes go, and know the consequences to humans and other living species and how [to minimize these impacts]?⁴

Certainly, numerous universities and colleges have programs, education events, and research that promote learning about these issues and solutions to them. But, until recently, they have been reluctant to assert creating a sustainable future as an institutional priority.

So, the question is:

What would a sustainable college or university look like? An academic institution committed to sustainability would help students understand the roots of environmental degradation and motivate them to seek environmental sustainable practices while teaching the roots of today's injustices in full integration with modeling justice with humaneness.⁵

Institutional Mission, Structure and Planning

A growing number of institutions have made explicit commitments to advance the importance of achieving a sustainable future. This begins at the top of the institution with its vision and mission statements. Turning policy into action requires much more.

The institution that takes a systemic approach is committed to using its education mission to "increase the awareness, knowledge, skills, and values needed to create a just and sustainable future"⁶. Through teaching, research and community service, the institution can make impact future generations.

Not only does an institution commit to educate those who are key to creating a sustainable future, it can also commits to *practice what it preaches by creating a sustainable campus and campus life*.

⁴ Anthony Cortese, *Ibid*, p. 16.

⁵ Richard M. Clugston and Wynn Calder, "Critical Dimensions of Sustainability in Higher Education", *Sustainability and University Life*, Walter Leal Filho, ed., Peter Lang, 1999.

⁶ Anthony Cortese, *Ibid*, p. 17.

Dynamic Model of Sustainable Higher Education Institutions

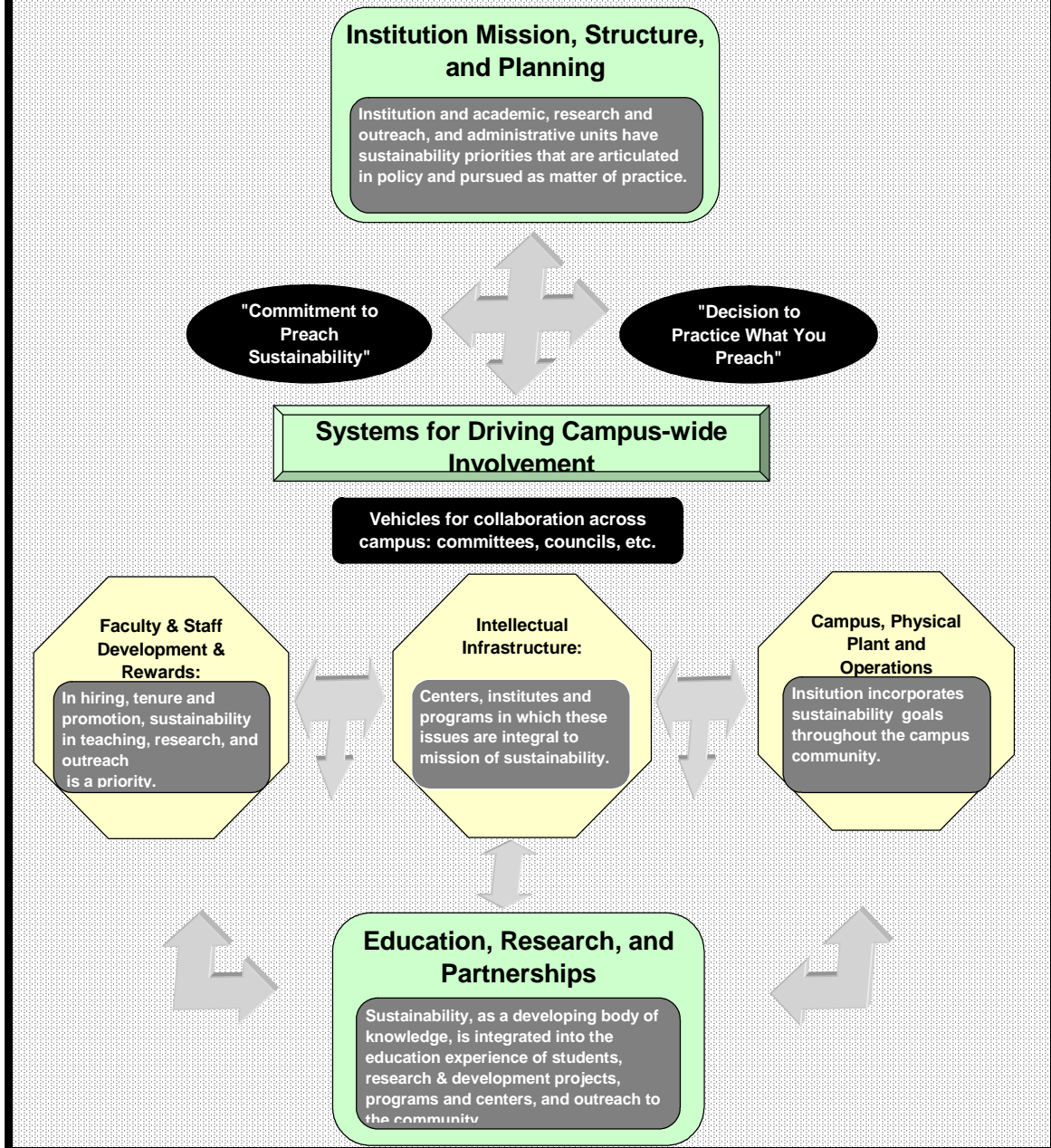


Exhibit 1: Modeling a Sustainable Higher Education Institution

These elements are presented at the top of Exhibit 1 designed to portray how an institution responds to the challenge of being a catalyst for change in creating a sustainable future. These actions may precede or lag campus efforts to address the role of the institution in creating a sustainable future occurring within or across colleges, departments, centers, or programs.

Systems for Driving Campus-Wide Involvement for Change

Change within the institution can occur from the top down or, on occasion, from the bottom up. Either way, it requires vehicles for discussing change and reaching agreement.

The ability to influence change requires a way to bring together people from across the campus to determine how to establish institutional priorities, or to ensure that they are carried out. Advancing institutional commitment requires clear *vehicles that allow collaboration to occur across the institution*. These formal or ad hoc structures, such as committees, councils, or task forces, are formed for the purpose of addressing these issues institution-wide. As well, parallel vehicles might be found within individual colleges or campuses of an institution. The purpose is to facilitate planning and coordination, more so than to carry out discrete actions.

Intellectual Infrastructure

As a learning institution, the ability of the institution to define and carry out specific initiatives is created by utilizing its numerous education, research and outreach units across campus. The capacity of the institution to carry out these desired activities is dependent on this *intellectual infrastructure* of the institution—its centers, academic units and research programs, etc. It is these units that define and carry out specific initiatives of the institution.

Faculty and Staff Recruitment, Development and Reward Systems

However, faculty and staff need to be able and willing to change since they are the ones who do the work required and can most effectively integrate the themes of sustainability in their various disciplines. Thus, creating for students a theme of knowledge that is covered in many courses over their years of higher education. New hires, professional development programs and reward systems likely will need to reflect these changing priorities, if they are to be fully engaged.

Building a Sustainable Campus Community—Campus Operations and Living

Practicing what you preach places the focus on the campus, its physical plant and operations. Creating a sustainable campus and campus life reflective of what needs to be mirrored by the larger society is a major commitment that universities and colleges can make to model sustainability goals.

Exhibit 2

Conceptual System of Higher Education and Sustainability				
Fulfilling Institution Mission in Higher Education				
Cortese: Modeling Sustainability	Examples			
Context of Learning				
Seamless & central part of teaching in all disciplines	All students take core curriculum on sustainability	Sustainable Lecture Series	Sustainability is integrated into most disciplines	
Sustainability is intentional component of academic disciplines reaching most students	Universities/Colleges offering courses with theme of sustainability included			
Process of Education				
Active, experiential, inquiry-based learning & real-world problem solving on campus & community		Student-generated initiatives on sustainability	Information in student packets; posters on campus	
Students can experience living and working sustainably on campus	Student/faculty initiatives/Identify connections between environment & health	Service Learning opportunities involving sustainability applications	Sustainability is theme included in campus-updates, newspapers, etc.	campus competition and green campus recognition, etc
Research & Development				
Investing in research programs on sustainability issues on campus & in community	Sustainability integrated into research on renewable energy, sustainable building design, ecological economics, etc.			
Research Impact of institution's sustainable practices				
Practice What You Preach				
Sustainability is integral part of operations, planning, facility design, purchasing, etc.	Awards given for sustainability	Hiring and rewarding faculty based on knowledge and use of sustainable models	Sustainable and conservation campus practices	
Partnerships...with local & regional communities to set & work toward sustainability goals				
Engage in outreach and forming partnerships both locally and globally to enhance sustainability	Engage Community in University Sustainable Lecture Series	Exhibit leadership in addressing smart growth & and sustainable planning and development in the community		
Collaborating with other institutions				

Anthony Cortese, "The Critical Role of Higher Education in Creating a Sustainable Future", *Planning for Higher Education*, 2002

Exhibit 2 summarizes the conceptual framework for understanding how a higher education institution can inter-relate its campus-wide efforts to help create a just and sustainable future for the university, the surrounding communities and region, and beyond. While the functions of learning, research, and external partnerships are distinct,

they are interrelated. Also, while creating sustainable campus is the responsibility of various administrative units, campus life of students, employees and visitors can greatly enhance and be enhanced by a sustainable campus and operations.

Student learning can occur by assisting in research projects and campus or community initiatives to establish and meet sustainable guidelines for land use and building operation.

By pursuing the objectives within each of the categories in Exhibit 2, a seamless system of education is possible where potentially everyone in the university's diverse community is touched by these initiatives in some ways—students and alumni, board members, employees at all levels, vendors and consultants, and visitors.

It is this framework that is the conceptual basis for the draft institutional assessment tool discussed in the next section of this report.

Part II

Prototype Assessment Tool

Taking Steps Toward Sustainability: A Sustainability Assessment Tool for Cleveland State, Youngstown State, Kent State, and University of Akron

The University's Unique Role in a Sustainable World

The university's role in promoting and implementing sustainability will have a profound impact on the future of not only the university, but also on local and global communities. The word sustainability is typically interpreted in the context of environmental practices. Here, though, we are looking at a broader view to include not only natural systems, but also built communities and social systems. Tied to sustainability in this larger context are the practices of sustainable development, stewardship, smart growth, sustainable consumption, and social justice.

Researching the Literature

To create this assessment tool, we initially relied on an already-existing questionnaire compiled by the University Leaders for a Sustainable Future entitled "Sustainability Assessment Questionnaire (SAQ)," which was broken into seven categories: curriculum; research and scholarship; operations; faculty and staff development and rewards; outreach and service; student opportunities; institutional mission, structure and planning. (See chart on the next page.) This gave us the framework to build upon. The SAQ is focused prevalently on environmental and ecological issues, and is designed so that many individuals on campus could offer their "opinions" on the state of sustainability on campus. We were more interested in creating an assessment tool based on research, and discussed how this could best be implemented. One of the ideas was to have one interviewer research all four of the Northeast Ohio universities so that there would be a cohesiveness in the way the instrument was used. Further, we wanted to expand the sustainability theme to include not only the environment, but also sustainable development, stewardship, smart growth, sustainable consumption, and social justice.

Research also included looking at declarations such as the Talloires Declaration, the U.N. Declaration of Human Rights, the Earth Charter, and Paul Hawken's "A Declaration of Sustainability," which helped establish fundamental aspects of sustainability and social justice.

A key figure in higher education and sustainability is Anthony Cortese (he heads the organization Second Nature, which is focused on education for sustainability. His writings and the Second Nature website were substantially influential in the creation of this assessment tool. In the *Journal of the Society for College and University Planning's* March-May 2003 *Planning for Higher Education*, Cortese is the lead writer in that issue's theme of "Sustainability: Taking the Long View." That issue of *PHE* was used often in the creation of the assessment instrument.

Further, we found inspiring examples at universities. In particular, we were impressed with the University of North Carolina, Chapel Hill, which had involved staff, faculty and students in passing resolutions and a declaration on sustainability. We wondered how that had come about. Our research revealed that the North Carolina Governor James B. Hunt Jr had crafted a Executive Order 156 in 1999 which is focused on environmental sustainability, reduction of waste, and procurement of environmentally preferable products. So, not only in UNC Chapel Hill involved in sustainable practices, but so are the majority of the other 16 universities in the state. We found other inspiring examples, such as Michigan State, U of C Merced, and others. It was heartening to see the beginning of a trend, and we believe that this broad-based assessment tool will help not only our Northeast Ohio universities, but will also be utilized by higher education institutions internationally.

Sustainability Assessment Questionnaire (SAQ): Seven Dimensions of Higher Education and Associated Indicators of Sustainability

Dimensions	Indicators of Sustainability
<i>Curriculum</i>	<ul style="list-style-type: none"> ▪ Courses with sustainability content in all departments ▪ Sustainability part of traditional disciplinary education ▪ Institution's relationship to surrounding environment part of formal and informal education
<i>Research & Scholarship</i>	<ul style="list-style-type: none"> ▪ Research and scholarship on sustainability-related topics/issues ▪ Interdisciplinary programs/structures for research and policy development
<i>Operations</i>	<ul style="list-style-type: none"> ▪ Environmental and sustainable practices (such as energy conservation and waste reduction) ▪ Operations integrated into education and research
<i>Faculty & Staff Development & Rewards</i>	<ul style="list-style-type: none"> ▪ Hiring, tenure and promotion recognize faculty contributions to sustainability ▪ Faculty and staff development opportunities enhance environmental awareness and sustainability
<i>Community Outreach & Service</i>	<ul style="list-style-type: none"> ▪ Projects and programs support sustainable local communities ▪ Partnerships for sustainability with K-12, business, government and other institutions at regional, national and international levels
<i>Student Opportunities</i>	<ul style="list-style-type: none"> ▪ Orientation and opportunities for student action and involvement in sustainability initiatives ▪ Exposure to environmental or sustainability-related careers
<i>Institutional Mission, Structure & Planning</i>	<ul style="list-style-type: none"> ▪ Formal written statements of mission and purpose reflect a commitment to sustainability ▪ Positions, committees, etc. exist which reinforce sustainability ▪ Sustainability and environmental issues given broad visibility on campus

Taking Steps Toward Sustainability

A UNIVERSITY SUSTAINABILITY ASSESSMENT TOOL

for Cleveland State, Youngstown State, Kent State, and University of Akron

The scope of this instrument:

For this tool, we are looking at the broad view of sustainability. While it is typically framed as an environmental and ecological issue, here we are looking at the following categories and definitions:

SUSTAINABLE DEVELOPMENT

- Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. – Brundtland Commission (United Nations). 1987

STEWARDSHIP

- The conducting, supervising, or managing of something; especially: the careful and responsible management of something entrusted to one's care; "stewardship of our natural resources." – Merriam-Webster Dictionary

SMART GROWTH

- Smart growth is development that serves the economy, the community and the environment. It simultaneously achieves economic development and jobs, strong neighborhoods and healthy communities. – Distilled from US EPA "What is Smart Growth?" from Smart Growth Fact Sheet, EPA 231-F-01-001A

SUSTAINABLE CONSUMPTION

- Sustainable lifestyles and ways of working are central to overcoming poverty and conserving and protecting the natural resource base for all forms of life. Sustainable methods of production are needed in agriculture, forestry, fishing and manufacturing. Use of resources need to be minimized, and pollution and waste reduced. – UNESCO (United Nations Educational, Scientific and Cultural Organization)

SOCIAL JUSTICE

- Equitable access to resources and the benefits derived from them; a system that recognizes inalienable rights and adheres to what is fair, honest, and moral. – McGraw-Hill Online Learning Center

This assessment tool is designed to be done via interviews and is organized in the following categories:

- I. INSTITUTIONAL MISSION, STRUCTURE, AND PLANNING
- II. SYSTEMS FOR DRIVING CAMPUS-WIDE INVOLVEMENT
- III. EDUCATION, RESEARCH, AND PARTNERSHIPS
- IV. INTELLECTUAL INFRASTRUCTURE
- V. FACULTY AND STAFF DEVELOPMENT AND REWARDS
- VI. CAMPUS, PHYSICAL PLANT, AND OPERATIONS

BRIEF SUMMARY: Taking Steps Toward Sustainability

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9 November 2006

Methodology

My methodology in identifying sustainability-oriented individuals, departments, programs and centers began with researching the university website and undergrad and grad bulletins. I also had discussions with administrators who knew the “lay of the land” on campus and could point me to key people with interest in sustainability or who had an historical perspective of the University. Besides those individuals identified through research and conversations, I also contacted all deans by phone, then by email, about the assessment tool, asking them to disseminate the email to all of their chairs and faculty members in order to identify courses and research centers that address any of the five sustainability definitions.

In utilizing the assessment tool, I referred to most of the first five sections to ask questions and spur discussion. However, I revised the “Campus, Physical Plant, and Operations” as the original “check this” format was not usable. I leaned heavily on UDC’s “Campus Sustainability Standards for YSU,” which was invaluable in crafting over 100 questions.

I sought out administrative, academic, research and support service individuals who could best answer the questions on the assessment tool. I searched for mission statements for the university, departments and centers to identify sustainability focuses and efforts. I secured a compendium of last year’s grants to see how much funding and what types of programs were oriented toward sustainability, and reviewed a complete list of student organizations and their missions in order to see grassroots efforts on campus. I communicated with key people involved in grounds, facilities, support services and recycling, and with numerous academic and research individuals. Conversations were by phone, via email, and person-to-person.

What the Assessment Reveals

The research for the assessment tool reveals a significant number of efforts across the University. (See addenda.)

A few examples: We have several robust recycling programs. The “Recycling and Reuse Program” is the largest of the programs, recycling in 2005 over 8,000,000 pounds of paper, metal, plastics, cans, glass and more. The program also just initiated the first university food-composting program in the state with a goal of 15 tons of food wastes per year.

The Center for Urban and Regional Studies partnered with the City of Youngstown over the past five years to develop a grass-roots land-use plan for Youngstown that envisions the purchase of land

for parks and the reclamation of large tracts of wetlands as part of a graceful downsizing of the city after losing population.

Facilities has built for the first time a parking lot that is a rain garden with bio-swales. Facilities partnered with environmental students through the process of planning and implementing the parking lot.

These are just a few examples; others surface within the assessment tool. Although some of the efforts are modest, the assessment reveals that Youngstown State University is in the early stages of waking up to the issues of sustainability. There's a lot to build on.

Recommendations: Capitalizing on the Assessment Information

The completed assessment provides an opportunity to communicate with all the sustainability-oriented parties. It also reveals the diverse expressions across campus regarding the broad issue of sustainability as defined here (sustainable development, stewardship, smart growth, sustainable consumption, and social justice). Disseminating the results of the assessment tool would provide awareness among the parties, hopefully creating voluntary connectivity.

A more assertive recommendation is the establishment of a committee or commission. Ideally, Dr. Sweet and/or the Center for Urban and Regional Studies could convene a commission to explore the possibilities of connecting points and intra-university synergies. The various parties could include professors, administrators, researchers, students, planners, and personnel from facilities, grounds and support services—and possibly community members, if that seems appropriate. A codified administrative-driven commission could create campus sustainability goals and objectives that dovetail and build on the Centennial Master Plan; explore the interdisciplinary and intra-campus possibilities; use the commission and the sustainability activities on campus as a selling point to potential students; and leverage media coverage, getting the issue of sustainability into the regional community.

Recommendations: The Assessment Tool

The scope of the tool is too broad. Sustainable development, smart growth, stewardship of resources, and sustainable consumption are closely related, dealing with land use, natural resources and systems, built communities, and how we interact with them. In fact, a new definition of “sustainable development” could encompass the other three definitions and would make the assessment process more streamlined.

Though social justice is a cousin, if you will, to the four definitions, its presence caused the assessment tool to sprawl. Social justice, as I came to find, can apply to health, working class studies, criminology, aging, Africana studies, global economics, and much more. I tied in some of the more obvious social justice programs, centers and courses, but it became overwhelming to find all of them, particularly courses. I focused more on the other four definitions.

If other universities and colleges utilize the tool, I would suggest deleting the social justice definition.

As I've reviewed the results of the assessment, I wonder if it makes sense to quantify the information, but I'm not convinced that would have a purpose. In the addendum, there is a printout of the website "RecycleMania," a friendly competition among several colleges and universities in the US. Though there is little purpose in the scores of each university, it draws attention particularly to those that get high scores. (YSU is ranked number 8.) Those scores can also be parlayed into good media, both in university literature as well as in the regional print, TV and internet. Based on that, I wonder if a scored assessment tool, especially if it's utilized by several universities and colleges in northeast Ohio, would make sense.

TAKING STEPS TOWARD SUSTAINABILITY

A UNIVERSITY SUSTAINABILITY ASSESSMENT TOOL

I. INSTITUTIONAL MISSION, STRUCTURE, AND PLANNING

II. SYSTEMS FOR DRIVING CAMPUS-WIDE INVOLVEMENT

III. EDUCATION, RESEARCH, AND PARTNERSHIPS

IV. INTELLECTUAL INFRASTRUCTURE

V. FACULTY AND STAFF DEVELOPMENT AND REWARDS

VI. CAMPUS, PHYSICAL PLANT, AND OPERATIONS

University: Youngstown State University

Date: 9 November 2006 (assessment took several months to complete)

Name of Interviewer: Holly Burnett-Hanley, YSU Center for Urban & Regional Studies

Names of Interviewees that participated (via person-to-person, phone and/or emails):

ADMINISTRATION

Franklin Bennett, secretary to the Board of Trustees since July 1990

FACILITIES & SUPPORT SERVICES (includes grounds)

John P. Hyden, Executive Director of Facilities and Support Services

Tony Syracuse, Associate Director of Facilities and Support Services

CENTER FOR URBAN and REGIONAL STUDIES

Hunter Morrison, Director

Dr. Gordon Mapley, Operations Manager

Tom Finnerty, Assistant Director

CENTRAL STORES

Rich DeLisio, Director, Materials Management

YSU PRINT SHOP

John Spencer, Director, Printing Services

PROGRAMS

Dan Kuzma, Manager, Recycle and Reuse Program

Sarah Ellis, Manager, Re-Create Program

Ron Williams, Elkton Correctional Program, Recycling Computer Parts

COLLEGE OF ARTS and SCIENCES

Dr. Ikram Khawaja, Dean of the College of Arts and Sciences

Dr. Lauren Schroeder, professor emeritus, Biological Studies

Dr. Isam Amin, Director of Environmental Studies Program

Dr. Ray Beiersdorfer, Geological and Environmental Sciences

Dr. Craig Campbell, Chair of Geography

Dr. Alan Jacobs, Chair of Geological and Environmental Sciences
Dr. Tom Shipka, Chair of Philosophy and Religious Studies
and former Academic Senate Chair
Dr. William Binning, Chair of Political Science
Dr. QiJiang, Chair of Sociology and Anthropology
Dr. Donna DeBlasio, Assistant Professor, History
Dr. Sherry Linkon, Co-Director, Center for Working Class Studies
Dr. John Russo, Co-Director, Center for Working Class Studies

COLLEGE OF BUSINESS ADMINISTRATION

Dr. Betty Jo Licata, Dean of the College of Business

COLLEGE OF EDUCATION

Dr. Phil Ginnetti, Dean of the College of Education

COLLEGE OF ENGINEERING and TECHNOLOGY

Dr. Cynthia Hirtzel, Dean of Engineering and Technology

Dr. Scott Martin, Civil / Environmental and Chemical Engineering

COLLEGE OF FINE and PERFORMING ARTS

Joe Edwards, Dean of the College of Fine and Performing Arts

COLLEGE OF HEALTH and HUMAN SERVICES

Dr. John Yemma, Dean of the College of Health and Human services

Note:

1. The use of the word “Sustainability” throughout this assessment tool implies Sustainable Development, Stewardship, Smart Growth, Sustainable Consumption, and Social Justice, unless specifically delineated.
2. The university will be referred to throughout as “HEI” (Higher Education Institution).

I. INSTITUTIONAL MISSION, STRUCTURE, AND PLANNING

Optimum: *Institution and academics, research and outreach, and administrative units have sustainability priorities that are articulated in policy, and pursued as a matter of practice.*

Previous Assessments

1. Has your HEI done an assessment of campus sustainability? **Yes**
2. If yes, when? **December 2004**
3. What is it named? **"Campus Sustainability Standards for Youngstown State University"**
Prepared by The Urban Design Center for Northeast Ohio, College of Architecture and Environmental Design, Kent State University, in collaboration with The Maxine Goodman Levin College of Urban Affairs, Cleveland State University, and the Northeast Ohio Research Consortium, a project of the Board of Regents' Urban University Program.
4. How is it available? **Through the KSU Urban Design Center, 216-357-3434, www.cudc.kent.edu**
5. If yes, what sectors of the HEI were assessed? (Check all that apply)
6. **Yes** Building and Grounds ___ Operations and Purchasing ___ Academics
 ___ Faculty & Staff ___ Other _____

Codified Policies

7. Are there written policies in the university's mission statement prioritizing sustainability?
Yes, but indirectly. The sentiment found through administrative interviews is that the priority of the University is fiscal soundness. So, if pursuing sustainable development is fiscally sound, the board of trustees will see it favorably. Historically, the subject of sustainability does not come up in board of trustees meetings. All that said, the YSU statements listed below indirectly support sustainable development and social justice, as in the Vision Statement quote below.
8. If yes, indicate the broadness of the definition: (Check all that apply)
X Sustainable Development X Stewardship X Smart Growth
X Sustainable Consumption X Social Justice
 ___ Other _____

Note: YSU's Vision Statement supports sustainability as follows: "In partnership with schools and the corporate, public, and non-profit communities, YSU will promote diversity and excellence in teaching, research, and service to increase the educational attainment, economic prosperity, and environmental vitality of the region." (See attached YSU Mission Statement.)

9. If yes, how is the document available?

www.ysu.edu:

YSU Vision Statement (other YSU Statements that indirectly support sustainability are listed below.)

YSU Mission Statement

YSU Centennial Master Plan

YSU Mission Statement

YSU Core Values

YSU Priority Statements

10. Are there written policies in university departments or centers that prioritize sustainability?

Yes

11. If yes, name those departments and/or centers:

Center for Urban and Regional Studies

Recycling and Reuse Program

Department of Biological Sciences

School of Technology

Chemical Engineering

Civil and Environmental Engineering

Civil and Construction Engineering

Oral History Program, History Department

Peace and Conflict Studies

College of Education

Department of Counseling

Sociology and Anthropology Department

12. If yes, how is it available? www.ysu.edu

Impetus

13. Are there governmental policies that drive the issue of sustainability at the HEI? (Choose all that apply)

Yes Federal policy (US EPA)

Yes State policy or order (Ohio EPA)

No Local municipal policy

14. Has the HEI signed any declarations regarding sustainability?

No

15. If yes, please check which applies:

An international declaration, such as the Talloires Declaration

(Name): _____

A declaration generated on campus (Name): _____

Other (Name): _____

16. If yes, how is it available? _____

17. If sustainability is a priority at the HEI, who or what is driving it forward? (Choose all that apply)

To the degree that sustainable issues have been identified and are being addressed, the following individuals, departments and centers are driving those issues. All that said, "sustainability" issues are not in the forefront of the general student body, staff or faculty; they are more niche-oriented.

President Sweet (as an urban planner and involved in Youngstown's 2010 Plan and the YSU Centennial Master Plan)

University Board

Committee, Council or Task Force

University Center: Hunter Morrison, Director, Center for Urban and Regional Studies

Department: Environmental Studies; Civil and Environmental Studies; Biology

Program(s): YSU Recycling Program; Re-Create Recycling Program

Student Organization

Surrounding Community

Other _____

Systemically Educating about Sustainability

18. Is there a systemic process by which all or part of the HEI is educated about sustainability?

No

19. If yes, which sectors? (Choose all that apply)

20. HEI board

21. How often? _____

22. Process _____

23. Staff

24. How often? _____

25. Is a particular group(s) targeted for training? Yes No

26. If yes, which group(s)? _____

27. Process _____

28. ___ Faculty

29. How often? _____

30. Is a particular group(s) targeted for training? ___ Yes ___ No

31. If yes, which group(s)? _____

32. Process _____

33. ___ Students

34. How often? _____

35. Is a particular group(s) targeted for training? ___ Yes ___ No

36. If yes, which group(s)? _____

37. Process _____

38. ___ Other

39. (Name:) _____

40. How often? _____

41. Is a particular group(s) targeted for training? ___ Yes ___ No

42. If yes, which group(s)? _____

43. Process _____

Training the Community

44. Is there a process by which the university is training community members, such as public officials, leaders?

No

45. If yes, please identify community sectors: _____

II. SYSTEMS FOR DRIVING CAMPUS-WIDE INVOLVEMENT

Optimum: *Vehicles for sustainable collaboration across campus (and community), such as committees, councils, or task forces, etc. exist.*

Committee, Council, Task Force Setting Policies and Long-Term Plans

46. Is there a committee, council or task force that reviews, sets policies, and plans for issues of sustainability?

No

47. If yes, please identify:

Note that the Master Centennial Plan, which is in the works, will include sustainable practices.

48. Is the committee, council or task force addressing the university systemically, or reviewing certain facets of the HEI?

Systemic University approach Involving community

Addressing certain facets of the university

Note: The City of Youngstown's 2010 Plan and the YSU Master Centennial Plan both include a degree of sustainable practices.

49. What is the scope of their work? (Check all that apply)

Sustainable Development Stewardship Smart Growth

Sustainable Consumption Social Justice

Other _____

50. Have they completed? If not, when will they be completed?

There is not a committee that specifically addresses the issues of sustainability, but sustainability is woven into the City of Youngstown 2010 Plan (which was developed in partnership with the Center for Urban and Regional Studies) and the YSU Centennial Master Plan. For the Centennial Master Plan, the Urban Design Center produced "Campus Sustainable Standards for Youngstown State University," which provides essential direction for sustainable best practices.

51. What is their intended outcome?

52. What is the composition of the group (by position and affiliation)?

53. Is there a report or document being created or is it already produced reflecting the outcome of their work?

54. How is it available? _____

III. EDUCATION, RESEARCH, AND PARTNERSHIPS

Optimum: Education—Sustainability principles are integrated into the education experience of students, research and development projects, programs and centers, and outreach to the community. Active, experiential, inquiry-based learning and real-world problem-solving is practices on campus and in the community. Educating about sustainability is a seamless and central part of all disciplines; the university offers courses with the theme of sustainability included. All students take a core course on sustainability. **Research**—Investing in research programs on sustainability issues on campus and in the community. Sustainability is integrated into research on renewable energy, sustainable building design, ecological economics. etc. The HEI researches its own impact of sustainable practices. **Partnerships**—HEI engages in outreach and forming partnerships locally and globally to enhance sustainability, and exhibits leadership in addressing smart growth, sustainable planning, social justice in the community.

Academics

55. What courses are either dedicated to the issue of sustainability or are addressing the theme in a significant way? (At least 25% of the course work.) Please identify the name of the course and the department offering the course. We did not push for the percentage of the course, but asked simply if courses addressed any of the five definitions. The reality of getting people to respond was difficult enough; it seemed that requesting even more information would likely slow the process further.

Course	Sustainability Issue(s)	Department
General Ethics	Stewardship of Resources, Social Justice	Philosophy and Religion
Environmental Ethics	Stewardship of Resources, Social Justice	Philosophy and Religion

Intro to Professional Ethics	Stewardship of Resources, Social Justice	Philosophy and Religion
Environmental Impact of Abandoned Mines		
	Stewardship of Resources, Social Justice	Geology
Aging and Society	Sustainable Consumption, Social Justice	Sociology
Sociology of Health, Illness and Healthcare		
	Sustainable Consumption, Social Justice	Sociology
Aging and Ethnicity	Sustainable Consumption, Social Justice	Sociology
Aging and Social Policy	Sustainable Consumption, Social Justice	Sociology
Sociology of Dementia	Sustainable Consumption, Social Justice	Sociology
Sociology of Death and Dying	Sustainable Consumption, Social Justice	Sociology
Women and Health	Sustainable Consumption, Social Justice	Sociology
Late Life Issues	Sustainable Consumption, Social Justice	Sociology
Sociology of Aging	Sustainable Consumption, Social Justice	Sociology
The Power, Meaning of Food	Sustainable Consumption, Social Justice	Sociology
Aging, Cross-Cultural Perspectives	Sustainable Consumption, Social Justice	Sociology
Criminology	Social Justice	Sociology
Minority Groups	Social Justice	Sociology
Juvenile Delinquency	Social Justice	Sociology
Social Deviancy	Social Justice	Sociology
Water in the Earth System	Sustainable Development, Smart Growth	Geography
Soils and Land Use	Sustainable Development, Smart Growth	Geography
Map Use and Interpretation	Sustainable Development, Smart Growth	Geography
Global Economic Landscapes	Sustainable Development, Smart Growth, Social Justice	Geography
Geology and the Environment	Sustainable Development	Geology
Intro, Environmental Science	Sustainable Development, Stewardship of Resources, Social Justice	Environmental Science
Foundations, Environmental Studies	Sustainable Development, Stewardship of Resources, Social Justice	Environmental Studies
Advanced Environmental Studies	Sustainable Development, Stewardship of Resources, Social Justice	Environmental Studies
Fundamentals of Environment Engineering	Sustainable Development, Stewardship of Resources	Environmental Studies
Applied Environmental Management	Sustainable Development, Stewardship of Resources	Environmental Studies
Resources & Environmental Economics	Sustainable Development, Stewardship of Resources	Economics

Urban & Regional Economics	Sustainable Development, Stewardship of Resources	Economics
Rich and Poor	Smart Growth, Social Justice	Economics
Economics of Poverty, Discrimination, and Transfer Programs		
	Smart Growth, Social Justice	Economics
Globalization and Worker Rights	Social Justice, Stewardship of Resources	American Studies

56. Are there interdisciplinary approaches to sustainability and/or collaboration in courses?

Don't know. The emails and phone calls requested identification of courses that fell under the five definitions of sustainability. The questions on courses ended there.

57. Are specific departments or professors "leading the charge?"

Yes, but in their own corner of the University world.

58. If Yes, please name.

Professor	Department
In their own departments, certain individuals are leading the charge, but there is no one person or group on campus that are making the issue of sustainability apparent to the general student body, staff or faculty.	
Dr. Carl Johnston	Chemistry, focus on bio-remediation of the Mahoning River (sustainable development)
Dr. Scott Martin	Civil and Environmental Engineering, focus on Watershed Action Plan for the Mahoning River (sustainable development, smart growth)
Dr. Donna DeBlasio	History, Center for Historic Preservation, focus on documenting and saving historic buildings in Youngstown and the region (stewardship of resources)
Dr. Sherry Linkon and Dr. John Russo at the Center for Working Class Studies (social justice)	

59. Has part or your entire faculty been trained in issues and practices of sustainability?

No training at this point ___ Part of faculty ___% ___ All of faculty

60. Are students involved in civic action or community service on the issue of sustainability?

Yes Civic Action ___ Community Service

61. If checked, Please elaborate:

A student-driven organization, YESS, is oriented toward environmental social justice issues. Together with professors and community members, they developed an "Eco-Justice" workshop on campus that occurred in November 2005.

62. Are there student organizations that address the issue of sustainability?

Yes

63. If yes, please name the group(s).

As above: A student-driven organization, YESS, is oriented toward environmental social justice issues. Together with professors and community members, they developed an “Eco-Justice” workshop on campus that occurred in November 2005

64. Please check which disciplines teach the issue of sustainability:

See number 55.

Natural Systems

- Biology
- Chemistry
- Environmental Studies
- Geology
- Physics
- Urban and Regional Studies

Built Communities

- Architecture and Design
- Civil & Environmental Engineering
- Historic Preservation
- Industrial Systems Engineering
- Mechanical Engineering
- Military Science
- Urban and Regional Studies

Societies & Institutions

- Anthropology
- American Studies
- Education
- Geography
- History

- Political Science
- Sociology
- Social Work
- Urban and Regional Studies
- Working Class Studies

Personal & Social Responsibility

- Criminal Justice
- Food and Nutrition
- Human Ecology
- Philosophy
- Psychology
- Public Health
- Religious Studies
- Women’s Studies

Finance, Business & Economics

- Administration
- Business
- Economics
- Finance
- Mathematics
- Statistics

IV. INTELLECTUAL INFRASTRUCTURE

Optimum: *Centers, institutes, and programs exist in which these issues are integral to the mission of sustainability. Sustainability is a theme included in campus updates, newspapers, etc. Campus competition and green campus recognition is initiated.*

65. Does the university have center(s), program(s), or institute(s) that integrate the mission of sustainability? **Yes**

66. If yes, please name them and give a brief summary of their missions:

Center for Urban and Regional Studies

Center for Historic Preservation

Center for Working Class Studies

Mahoning River Basin Research Center

The PACER Program

Center for Environmental Monitoring and Restoration

Wetland Mitigation and Stream Restoration Program

for Mill Creek, Yellow Creek and Meander Creek Watershed

67. Is there one particular center, institute, or program that drives the mission of sustainability forward at the HEI?

No

68. If yes, please indicate which: **The above centers and programs drive their particular approach to issues of sustainability in their particular purview, but there is no dissemination of those messages to the general student body, staff or faculty.**

69. What percentage of funding and staff are dedicated to the issue of sustainability?

Don't know.

70. Check which activities take place at the center?

Teaching Research Collaboration with operations/grounds keeping

Student Opportunities Outreach to the community

Center for Urban and Regional Studies Outreach to community

Center for Historic Preservation Teaching, research and outreach to community

Center for Working Class Studies Teaching, research and outreach to community

Mahoning River Basin Research Center Teaching, research and outreach to community

The PACER Program Research and outreach to community

71. What are the mechanisms that connect this center, institute or program to other facets of the HEI?

See above.

72. Is there a key person or persons in place to oversee the mission of sustainability at the HEI?

No

73. If yes, what is that person's/persons' position(s)?

Position

Center, Institute or Program

V. **FACULTY AND STAFF DEVELOPMENT AND REWARDS**

Optimum: *In hiring, tenure and promotion, sustainability in teaching, research, and outreach is a priority. Hiring and rewarding faculty based on knowledge and use of sustainable models.*

74. Check the following that are a priority in hiring faculty?

There are no current University policies that prioritize sustainability.

Sustainable Development Stewardship Smart Growth

Sustainable Consumption Social Justice

Other _____

75. Please elaborate:

76. Check the following that are a priority in research?

For specific departments, centers or programs, but not as YSU policy.

Sustainable Development Stewardship Smart Growth

Sustainable Consumption Social Justice

Other _____

77. Please elaborate:

Center for Urban and Regional Studies	Sustainable Development, Smart Growth
Center for Historic Preservation	Stewardship
Center for Working Class Studies	Stewardship, Social Justice, Sustainable Consumption
Mahoning River Basin Research Center	Sustainable Development, Stewardship, Smart Growth
The PACER Program	Sustainable Development, Smart Growth
Center for Environmental Monitoring and Restoration	Sustainable Development, Smart Growth
Wetland Mitigation and Stream Restoration Program for Mill Creek, Yellow Creek and Meander Creek Watershed	Sustainable Development, Smart Growth

78. Is the teaching of sustainability rewarded?

Not as a University policy.

79. If yes, please elaborate:

80. Are tenure and promotion tied in any way to the integration of sustainability into academic courses, faculty-driven publishing, etc.?

No

81. If yes, please elaborate:

VI. **CAMPUS, PHYSICAL PLANT, AND OPERATIONS**

Optimum: *Institution incorporates sustainability practices throughout the HEI community.*

Sustainability is an integral part of operations, planning, facility design, purchasing, investing, etc.

Students experience and are educated by living and working on a sustainable campus.

SUSTAINABLE GOALS

82. Are sustainable goals factored into the campus concepts and practices?

Yes

83. Are physical plant and operations staff trained in the subject of sustainability?

No

84. Are there plans to train staff in sustainable best management practices?

No

Good idea, but no plans in place; not opposed to it.

85. To what extent are your operations practices integrated into the educational, scholarly, and community service activities of the HEI?

0 (don't know) 1 (none) X 2 (a little) 3 (quite a bit) 4 (a great deal)

Our newest parking lot is a rain garden with bio-swales. Students in environmental studies were involved in the planning and have a curriculum that ties into the project.

Also, engineering students tie into facilities through hands-on training.

86. To what degree are sustainable goals factored into the campus concepts and practices?

50% Whenever it is cost-effective; wherever it's economical to do environmentally sound projects.

INDOOR AIR QUALITY

87. Ban on Smoking?

Yes

88. Which buildings?

All Buildings. There is a designated smoking area in the exterior concourse at Stambaugh Stadium.

89. Maintain relative humidity between 30% and 40%?

About half of the buildings are humidified; all have de-humidifiers. Not sure of the 30% to 40%.

90. Provisions to keep second-hand smoke from entering buildings?

People stand near doors when they smoke and smoke does come in as a result. We've talked about designating particular entrances where people can smoke so that other entrances are smoke-free.

91. Provisions to keep pollution, exhaust from entering buildings?

92. Avoid the purchase of products with high levels of formaldehyde and PCBs?

We are PCB-free. We do not monitor formaldehyde.

93. Install permanent carbon dioxide monitoring systems in campus buildings?

No

94. Install independent system(s) to monitor for contaminants such as ozone, radon, nitric oxide, sulphur dioxide, fungus, and mold?

No

Problems are not widespread? We respond where there's a recognized problem. In any suspected areas, we do testing.

BUILDING MAINTENANCE

Cleaning Products

95. What percentage of cleaning supplies is non-toxic and phosphate-free?

Don't know. All our cleaning suppliers are subcontracted.

96. Has the University implemented an environmentally preferred purchasing program.

No Some (environmentally sound?) supplied by subcontractors.

97. Does the University determine the main ingredients and toxicity levels for cleaning products?

No We don't specify to subcontractors what they use.

98. Does the University pilot-test new products before making a university-wide switch?

No At the YSU level, there is not a unified purchasing process; plus, there are the subcontractors that purchase their own supplies.

99. Does the University use cleaning products that are available in a concentrated form to reduce waste?

No

Paint

100. Does the University limit the use of spray guns to high volume and fully enclosed low-pressure guns?

No Prevailingly, we do that in a paint booth. Also, we use VOC paints; water-borne epoxies and latexes. Recently, the athletics facilities were painted and the first two layers were brushed and rolled; the final one was sprayed.

101. Does the University select less hazardous paints that have low-volatile organic compounds?

Yes

102. Does the University Choose latex or other water-based paints, rather than oil-based paints?

Yes

CIRCULATION & PARKING

Street Design

103. Streets, walks lead to and through the campus?

Yes

104. Plants materials on campus are hardy and salt-tolerant?

Yes

105. Sidewalks minimum of six feet wide?

Yes

106. Asphaltic concrete w/ minimum of 25% recycled content by weight?

Don't think so; we use very little concrete and asphalt. We do parking lot paving, using recycled asphalt rather than the told steel mill asphalt.

PEST MANAGEMENT

107. Does the University implement integrated pest management strategies, including the selective application of low-impact pesticides?

Yes We used to use bulk spraying, but don't do that now.

108. Does the University introduce natural predators to control pests?

No

109. Does the University apply pesticides only where needed, in limited and targeted applications?

Yes

110. Does the University use direct application of pesticides to problem areas rather than sprays and fogs to limit airborne exposure?

Yes

111. Does the University apply pesticides only when buildings are unoccupied and food is safely stored to prevent accidental exposure?

No YSU Facilities spray outside of buildings. Inside pest control are done by subcontractors.

WATER CONSERVATION

112. Has the University conducted a water audit to identify and evaluate plumbing equipment on campus?

No

113. Conducted a water conservation campaign to reduce campus water usage?

No We have no current plans to.

114. Retrofitted or replaced toilets, faucet aerators, and showerheads with low-flow models?

No Any new fixtures are low-flow. All shower facilities have recently been remodeled. We have some siphon toilets.

115. Decrease the use of potable water for sewage conveyance by using gray water systems?

No

116. Limited the use of potable water for landscape irrigation by harvesting and storing rainwater for later use in the irrigation of campus grounds?

No

117. Use hardy native plant species for campus grounds to limit the need for supplemental irrigation?

Yes We use them more and more.

118. Where irrigation is required, use drip irrigation, micro-irrigation, moisture sensors, weather-based controllers, or other water-efficient systems?

Yes We monitor water usage based on weather; our watering is a very conscious process.

119. Establish separate zones for plants with different water needs, so irrigation is only provided where necessary?

Yes Irrigation planning is deliberate.

STORMWATER MANAGEMENT

120. Has the University determined the goals and expected outcomes of a campus-wide stormwater management plan?

No

121. Preserved any existing wetland areas on or near campus as a first and most important step for reducing storm water runoff?

No

122. Maximize on-site storm water infiltration and capture rainwater from impervious areas for groundwater recharge or reuse within campus buildings?

No

123. Prepare storm water management plans for all new and existing campus parking lots?

No

124. Provided landscaping for all surface parking lots; at least 20% of the surface area of any hard-surface paved area should be landscaped?

No

125. Planted trees at the perimeter of parking areas as well as within the lots?

Yes

126. Use permeable paved surfaces, such as porous concrete and porous asphalt, interlocking pavers, open-grid pavement systems, and reinforced grass for parking lots to reduce storm water runoff?

No Have talked about it.

127. Incorporate planting strips between sections of pavement to screen parking areas and collect runoff?

Yes About 15-20%. Most of our storm water collection is through underground detention areas.

128. Has the University used or considering incorporating planting strips between sections of pavement to screen parking areas and collect runoff?

Yes Our new bio-swale is our first, and we will see more bio-swales in the future.

129. Has the University used or considered incorporating bio-retention basins or “pocket wetlands,” which consist of deep, porous earth areas planted with trees and shrubs that thrive in wet and dry conditions?

Yes

130. Has the University used or considering incorporating green roofs?

No

EROSION CONTROL

131. Does the University avoid development on sites with extreme slopes or hills?

Yes We don't have much choice; we're landlocked.

132. Does the University incorporate an erosion and sediment control plan into all capital improvement projects on campus?

Yes To the degree that we are required by the EPA.

133. Does the University identify and map areas with high susceptibility to erosion for the entire campus?

No It's largely non-applicable, except during construction.

134. Does the University use silt fencing, sediment traps, and other stabilization methods for steep slopes?

Yes During construction.

135. Does the University provide or maintain a hardy ground cover to reduce erosion during construction projects?

No

136. Does the University limit the disruption of topsoil and native vegetation during construction projects?

Yes

137. Does the University choose appropriate plantings of native grasses, shrubs, and other vegetation to reduce the risk of erosion on hillsides and steep slopes?

Yes

GREEN SPACE NETWORKS

138. Is establishing a land conservation plan and the preservation of open space a priority for the University?

No It's desirable, but our land-locked situation leaves us little options.

139. Does the University maximize the quantity and quality of landscaping throughout the campus; consider all surfaces as landscape opportunities, including roofs and walls?

Yes Not on roofs and walls.

140. Does the University integrate and closely coordinate building and landscape design for all new construction and rehabilitation projects.

Yes

141. Does the University design multi-purpose landscapes that provide recreational opportunities, treat storm water, create bird and animal habitat, and reduce heat islands?

Yes Not intentionally, but we do, especially when we're looking at a multi-purpose aspect.

142. Has or will the University create a habitat plan to identify planting strategies that encourage a healthy ecosystem on campus?

Not sure It may be an outcome by mistake; it isn't a focus.

143. Has or will the University create a comprehensive approach to linking public and private open spaces will help to establish the critical mass needed for effective habitat creation and conservation?

Yes

145. Does the University make sustainability efforts visible throughout the campus to reinforce the University's educational mission and its commitment to the environment?

Yes

For example:

146. Use rainwater collection features to demonstrate how rainwater is collected and reused on campus?

Yes

147. Curbs that have been eliminated in selected areas to allow rainwater to run into planting strips, demonstrating the concept of natural irrigation?

No

148. Installing of photovoltaic panels in campus open spaces that use collected energy to power lighting, clocks, fountains, and other amenities?

No

149. Develop an interpretive sign system that identifies sustainable features of the campus?

No

150. Does the University aim to provide shade for at least 30% of non-roof impervious surfaces on campus, including parking lots, walkways, and plazas?

No

151. Has or will the University design parks and green spaces as extensions of indoor spaces to maximize their use?

Yes The new College of Business (currently being planned) will demonstrate that.

LANDSCAPING AND PLANT MATERIALS

152. Has or will the University inventory trees, shrubs, and other plant materials on campus to identify invasive exotic species (to be removed) and to quantify the proportion of the existing landscape that is composed of Ohio-native species?

Maybe We've talked about subcontracting a consultant.

153. Use native plants wherever possible?

Yes

154. Aim to have campus landscaping that consists of at least 50% native species and 75% low maintenance plants (those that require minimal mowing, weeding, trimming, and irrigation)?

Yes Except for the lawns, which require weekly mowing and irrigation.

155. Incorporate a diverse range of plant materials in campus green spaces, particularly plants that grow naturally together and are self-sustaining?

Yes Not formally, but we've become more aware of costs and use more perennials.

156. Plant seed-, berry-, and nectar-producing shrubs that are attractive to birds, butterflies, and other insects?

Yes Some. It's not a conscious decision to track them; it's more based on economics and aesthetics.

157. Avoid plant species that require frequent maintenance and irrigation?

No These take a high degree of maintenance, so we stay away from those types of plants

158. Avoid allergy-causing plants and those that require chemical treatment?

Yes These take a high degree of maintenance, so we stay away from those types of plants.

159. Focus planters in specific areas to achieve maximum impact?

Yes But, we're using them less and less—they turn into ashtrays.

160. Container plantings typically require fertilizers to maintain plant health; develop a nutrient management plan (including periodic soil testing) to ensure that fertilizers are only applied in the minimal quantities needed for plant health.

Yes We are minimizing chemicals. Both economics and attitudes are driving that.

161. Does the University use herbicides? If so, what degree of toxicity? If so, where?

Yes We don't use them wholesale, and all herbicide applicators are trained.

LANDSCAPE MAINTENANCE

Maintenance products

162. Substitute non-toxic products for toxic products wherever possible. For example, water-based paint can be used to line the boundaries of athletic fields to reduce the use of hazardous substances?

Yes Wherever possible.

163. Consider organic alternatives to herbicides, pesticides, and insecticides?

Don't know

164. Develop a nutrient management plan for campus grounds to reduce the need for fertilizer applications; conduct a soil test before applying fertilizer?

Yes

University lawns and fields

165. Allow some areas of indigenous plant species in University green spaces to reduce lawn maintenance requirements?

Yes A few patches when someone presses us to do them. Then, typically, someone else complains about the way they look and wants them to be taken out.

166. Increase the diversity of grasses and other plants in lawn areas to include clovers and naturally occurring broadleaf plants (typically considered weeds) in order to reduce watering requirements and reduce or eliminate the need for herbicides and pesticides?

No

170. Mulch grass clippings while mowing and allow them to remain on lawn areas; this practice saves labor, reduces waste disposal, and provides a natural alternative to chemical fertilizers.

Yes

171. Raise mowing heights to 5" to maintain healthy turf grass and inhibit the growth of weeds.

No 3'

172. Allow soil to dry between waterings to inhibit beetle grubs, webworms, moles, and lawn diseases?

Yes Normally.

173. Compost leaves to re-use in spring or fall for top-dressing?

174. Specify hydromulch consisting of 100% recycled materials) for campus grounds?

175. Whenever possible, allow lawns and athletic fields to "rest" for limited period after heavy use?

SNOW AND ICE REMOVAL

176. Keep stockpiles of salt in enclosed storage structures to reduce the risk of polluting runoff.

Yes We store it in a three-sided barn.

177. Consider chemical alternatives to salt so as to have less damaging impact on sensitive trees and plantings.

178. Avoid piling snow on planting areas and bio-retention basins.

ALTERNATIVE MODES OF TRANSPORTATION

179. Bicycle racks, storage lockers, showers for bicyclists?

Yes We have about 50-100 bicycle racks in various locations. No storage lockers or showers for bicyclists.

180. Stripe roadways with bike lanes (where)?

No We have no plan at this time.

181. Signage for bikeways "Share the Road" where no bike lanes exist?

No

182. Clear and safe crosswalks with signage and lights as needed, to ensure pedestrian safety.

Yes Would like to see more.

PARKING

183. Site parking facilities strategically to provide safe and convenient access to main campus destinations.

Yes

184. Preferred parking near building entrances for carpools and alternative fuel cars.

No

185. Allow for and accommodate alternative uses (such as tailgating activities) in campus parking facilities.

Yes

ENERGY

186. What are YSU's sources of energy?

Steam, gas, water and electric

187. Quantify emissions.

Virtually zero, except for the indirect emission produced at the local power plant and Youngstown Thermal.

188. Will or have there been upgrades on campus to save energy?

The university has signed a \$12 million contract with Johnson Controls to make energy-saving upgrades. Johnson Controls guarantees the University will see \$15 million in energy savings over the first 10 year.

HAZARDOUS WASTE

189. How is hazardous waste handled on campus?

We subcontract a hazardous waste contractor who follows regulations.

RECYCLING

190. Are there recycle programs on campus?

Yes

191. If yes, elaborate:

The “Recycling and Reuse Program” is the largest of the recycling programs on campus, recycling in 2005 over 8,000,000 pounds of paper, metal, plastics, cans, glass and more. The program also just initiated the first university food-composting program in the state with a goal of 15 tons of food wastes per year.

Working in tandem with the Recycle and Reuse Program is “Re-Create,” which re-uses materials and donates them to schools, non-profits and other organizations.

Also on campus is a program tied with the Elkton Correctional Facility in Columbiana County and the Unicorp Corporation, a government-funded prisoner reform program in which YSU recycles 40,000 pounds worth of computers that the prisoners are paid to dismantle the computers to be re-used as raw materials, which include glass, lead, metal, mercury, copper, and plastic.

Ninety-eight percent of the printing paper purchased through the YSU Print Shop contains post-consumer waste between 10-30%. Estimates of tonnage per year range from 25 to 40. Virtually all paper left from the printing process is recycled through the Recycle and Reuse Program on campus.

Central Stores purchases 1,000 tons of paper each year with 15% post-consumer waste, and also refurbish 700 printer cartridges each year; cartridges bought new are refurbished after use.

Grants that Focus on Sustainability

192. How much funding had the University received in grants for sustainability-oriented programs?

Between July 1, 2005 and June 30, 2006, the University received over \$300,000 for 13 grants that focused on a variety of sustainability issues: stream monitoring and restoration of watersheds; middle school education about streams, river restoration, land use and protection of watersheds; regional land-use planning processes; creation of surveys for citizen education about stormwater, among others.

Sources for University Sustainability Assessment Tool

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University Leaders for a Sustainable Future, "Sustainability Assessment Questionnaire (SAQ)," http://www.ulsf.org/programs_saq_chart.htm

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<http://sustainability.unc.edu/>

Michigan State University Office of Campus Sustainability, University Committee for a Sustainable Campus, "Campus Sustainability Report," 2003
<http://www.ecofoot.msu.edu/>

Declarations for Sustainable Development: Talloires Declaration, Halifax Declaration, ACU -- Swansea Declaration, Kyoto Declaration, CRE Copernicus Charter, Earth Summit Agreements, Student Declaration for a Sustainable Future
<http://www.iisd.org/educate/declare.htm>

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http://www.c2e2.org/ems_assessment/questionnaire/cover.htm

The Vision for UC Merced, "A Campus for the New Millennium," 2001
<http://www.ucmercedplanning.net/information/draftuclrdp.html>

Penn State Green Destiny Council, "Penn State Indicators Report 2000: Steps Toward a Sustainable University," 2000
<http://www.bio.psu.edu/Greendestiny/steps.shtml>

Websites (see Sources also for additional websites)

Second Nature: Education for Sustainability

Second Nature's vision of a healthy, just and sustainable future sees the critical role of higher education in achieving that vision by leading the way in educating for sustainability

<http://www.secondnature.org/efs/efs.html>

North Carolina Universities: N.C. Project Green (Steps to Environmental Sustainability in State Government)

View the Sustainability Reports of 17 N.C. state universities.

<http://www.p2pays.org/ref/07/06568/2001/nframe.asp?page=UNV-UNCCH1.htm>

University of Colorado at Boulder

View the original Campus Blueprint for a Green Campus and the yearly updates:

http://www.colorado.edu/cuenvironmentalcenter/greening_cu/#blueprint

Middlebury College

Report on Middlebury sustainability initiatives by Dartmouth College:

<http://community.middlebury.edu/~enviroc/dart.html>

Oberlin College

The Environment and Oberlin: An Update:

http://www.oberlin.edu/alummag/oamcurrent/oam_summer2002/feat_enviro.htm

University of British Columbia

Links near the bottom of the page go to recent Campus Sustainability Reports:

<http://www.sustain.ubc.ca/>

University of Vermont

Tracking UVM: Environmental Report Card 1990-2000:

<http://www.uvm.edu/greening/intro.html>

Michigan State University

MSU's Campus Sustainability Report:

<http://www.ecofoot.msu.edu/>

Concordia College (Montreal)

Concordia Campus Sustainability Assessment (2004):

<http://web2.concordia.ca/sustainability/assessment.html>

Part III
Prototype Benchmarking Tool

Part IV

Prototype Campus Sustainability Guidelines: Proposed for Youngstown State University

The KSU/UDC prepared a manual of model Campus Sustainability Standards with innovative LEED-based (Leadership in Energy and Environmental Design) design criteria that encourages sustainable development and redevelopment. Youngstown State University is the model for the Standards, but the manual can be customized to be location-specific to meet the needs of universities and other institutions statewide. The Standards consist of incremental, inter-related steps toward sustainability in the design, construction, and maintenance of university buildings and grounds. The KSU/UDC will work with Youngstown State University, as part of the University's master planning process, to refine the model standards to address YSU's specific, evolving goals for sustainability.

The LEED guidelines focus on buildings. The Campus Sustainability Standards developed by KSU/UDC also include guidelines addressing:

- Development density
- Land use relationships
- Building form, orientation and scale
- Circulation systems (streets, bikeways, pedestrian paths)
- Transit services
- Parking lot design (permeability, drainage, etc.)
- Open space and landscape
- Alternative energy systems (solar, geothermal, etc.)
- Maintenance practices

By using the KSU/UDC Campus Sustainability Standards as a guide, a baseline of selected activities can be generated from either general university goals or the University's Master Plan vision statement. The list of monitored projects can be expanded and monitored on an ongoing basis.

Epilogue

We have developed prototype tools for determining what is occurring, or might occur, on our four campuses based on identifying other institutions that are doing exemplary things. What we don't know is HOW they were able to achieve this.

We can

- Further develop this process by doing selected case studies to determine the key conditions to success.
- Build interest and willingness to test these tools within our four institutions—doing at least two of the four.
- Integrate YSU's Campus Sustainability Guidelines into the YSU Master Plan.
- Create a matrix portraying how each discipline can integrate the theme of sustainability.
- Convene a major forum to promote the involvement of Ohio institutions.

Comments: hard to codify 25% or more on the courses identified.