

# FINAL REPORT

FROM

THE 'GREEN' COMMITTEE  
ON ENVIRONMENTAL STUDIES

SUBMITTED TO

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PROVOST AND VICE PRESIDENT FOR ACADEMIC AFFAIRS

BALL STATE UNIVERSITY  
MUNCIE, INDIANA

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## COMMITTEE MEMBERSHIP

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Dr. John Pichtel  
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Geology

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Biology

Dr. Leslie Smith  
Landscape Architecture

Dr. Michael Sullivan  
Geography

Dr. Don VanMeter  
College of Sciences and Humanities

## PREFACE

In March 1991, Provost Warren Vander Hill appointed a university level 'Green' Committee to examine environmental concerns as related to the University's educational mandate. The Provost charged the 'Green' Committee to formulate recommendations which, if undertaken might "...raise environmental consciousness in our student body, foster conviction in students regarding these issues, and empower them with understandings of how they might channel their awareness effectively to shape the future".

The objectives for the Committee's work were suggested to include the ways in which the University could: 1) more broadly incorporate environmental issues into course offerings; 2) further cultivate the linkage of emerging environmental issues with established academic programs; and 3) utilize environmental issues as a means to develop students' critical thinking abilities. The Committee was invited to broaden these initial objectives as it called on the expertise of its members.

In response to the Provost's charge, the Committee undertook a thorough inventory of current contexts and opportunities for achieving these ends. Student and faculty questionnaires, syllabus surveys, direct interviews, and literature and archival research were employed.

The 'Green' Committee's recommendations which follow are intended to have impact on internal and external constituencies of this institution.

Internally, the recommendations are expected to have direct impact on curriculum structure, course content, classroom activities and the more general academic environment. Externally, the recommendations will have impact on the perception and understanding by others of the importance of environmentally sound stewardship.

This report represents contributions made by all members of the Committee during some 23 full committee meetings and numerous unaccounted subcommittee gatherings. Members of the Committee offer to reconvene at the Provost's request to evaluate progress made with implementation of these recommendations and/or to make revised recommendations to the Provost, as appropriate.

**UNIVERSITY PROPERTIES**

Christy Woods  
Halt Farm  
Sutton Acres  
Cooper Woods  
Oria Woods  
Heath Farm

**CAMPUS PLANNING**

Crowds  
Academic Buildings  
Residence Hall Life  
Picnic Shelters  
Energy Budget

**FORESTATION**

Stockpiling / Tree Nursery  
Tree Committee  
Labeling

**RECYCLING**

On-line Buildings  
Community Dropoffs  
Product Use

**ENVIRONMENTAL SAFETY**

Lab Handbooks  
Chemical Inventories  
OSHA Compliance  
Chemical Waste Handling  
Radon Testing

**LOCAL PROBLEMS**

Acid Rain  
Pesticide and Fertilizer Runoff  
Radon  
Solid and Hazardous Waste  
Soil Erosion  
Water Quality and Flooding  
Wastewater Treatment  
Public Outdoor Recreation  
Other Agricultural Problems  
Construction Materials Resources

**LOCAL OPPORTUNITIES**

PAWS  
Montgomery Woodlot  
Reed Farm  
Prairie Creek Reservoir  
Gaston Post Boggs/Wildlife Preserve

**FACULTY**

Interdisciplinary Work  
Individual/Group  
Lectures

**STUDENT GROUPS**

NR Club  
Cosmos Ground  
Student Environmental Co.  
Dorm Councils/Praternities

**RESEARCH**

CESAR  
CERES  
Fiber Piel  
Petroleum Waste Disposal  
Indoor Air Quality  
Ornat Opportunities  
Undergraduate Fellows  
Office of Research  
Sigma Xi  
External  
Think Tank  
Lake Michigan Fisheries  
Batt Conservation

**INFORMATION ARCHIVES**

Videos  
Films  
Periodicals  
Gameboards  
Tutorial Modules  
CD Rom Databases

**COURSES**

Environmental Minor  
Departmental Courses  
Cluster Approach  
Summer Workshops  
Honors Colloquium and Symposium

**PROGRAMS**

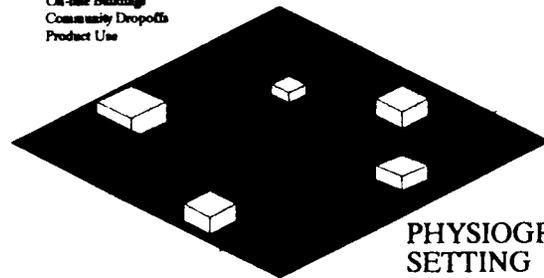
UniverCity '92  
Provost Lectures  
Departmental / College Lectures/Seminars  
Europe Year  
Earth Day  
WIPB-TV, WBST  
Environmental Programming

**DEGREES**

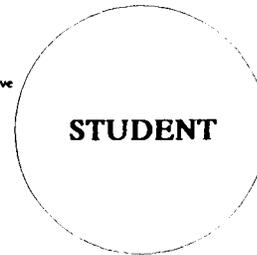
Natural Resources  
NR Studies  
Interpretation/Public Info  
Outdoor Recreation Mgt  
Environmental Protection  
Land Resource Mgt  
Landscape Architecture  
Biology/Wildlife Option  
Aquatic Biology Option  
Applied Physics / Solar Energy  
Urban Planning  
Industrial Management

**GRADUATE SCHOOLS/OTHER PROGRAM/MODELS**

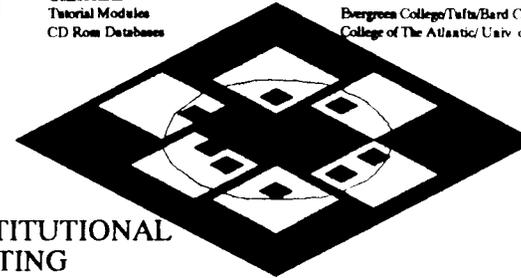
Bergreen College/Tufts/Bard College  
College of The Atlantic/Univ of Waterloo



**PHYSIOGRAPHIC SETTING**



**STUDENT**



**INSTITUTIONAL SETTING**

**STRUCTURING OPTIONS FOR COGNITIVE MAPPING**

( Navigating Environmental Awareness )

## EXECUTIVE SUMMARY

The ‘Green’ Committee adopted its Mission Statement directly from the Provost’s charge; in response to the invitation to broaden the scope of objectives the Committee found it helpful to distinguish opportunities categorically as related to the University as (A.) an institutional setting and (B.) an environmental (physiographic) setting. The details of this framework are best illustrated in the cognitive map on the facing page. This provides the quickest overview of the range of elements which must be considered in formulating an action plan out of the recommendations made in this report.

The goals and objectives which comprise the final Committee recommendations provide dramatic opportunities for Ball State University to affirm itself further as a premier teaching university — functioning as a model environmentally conscious ‘community’. The recommendations address issues of the stated university mission, mechanisms of educational delivery, cultivation of the linkage between undergraduate and faculty research, and the management of university properties and facilities.

The recommendations for implementation are prioritized as follows:

- (1) immediate networking and follow-through at minimal expense;
- (2) significant capital investment and/or endowment; and,
- (3) developmental transformation involving structural change.

Included at the close of the report are matrices which recommend on- and off-campus organizations and individuals who could be tapped to guide, coordinate and assist in the implementation of the cross-referenced recommendations. The listed participants range from University-level offices through colleges and departments to program units and ultimately include individual faculty and staff by name. It is hoped by providing such an implementation matrix, the Provost and Senior Staff will be able to undertake immediate steps to act on this report for the benefit of the institution.

Environmental concerns transcend disciplinary boundaries, including everything from art to zoology. It is the administration’s obligation to serve as catalyst in environmental consciousness raising. Implementing recommendations outlined in this report will serve this function. Ball State is poised to capitalize on this opportunity.

# TOPICAL LISTING: RECOMMENDED IMPLEMENTATION OBJECTIVES

## I. IMMEDIATE IMPLEMENTATION AT MINIMAL EXPENSE

### A. The Institutional Setting

- A.1 University Mission Statement
- A.2 Information Clearinghouse
- A.3 External/Community Research Opportunities
- A.4 Faculty Convocations on Curriculum Development
- A.5 Faculty Research and Teaching Incentives
- A.6 Faculty/Staff Reward System
- A.7 Environmental Studies Options
- A.8 Environmental Ethics Course
- A.9 Line-Item Financial Support for Student Organizations
- A.10 Counseling for Prospective Graduate Students
- A.11 Environmental Studies Graduate Assistantships
- A.12 International Connections
- A.13 Student Affairs
- A.14 Enhanced Collaborative Faculty Efforts
- A.15 Enhanced Faculty Research Opportunities

### B. The Physiographic Setting

- B.1 Model Environmental Practices
- B.2 Model Environmental Policies
- B.3 Campus Settings as Environmental Teaching Tools
- B.4 Promotional Efforts
- B.5 Physical Plant Teaching and Research
- B.6 Property Manager for Outlying Properties
- B.7 Kiosk Information
- B.8 Database Access

- B.9 Forestation Committee
- B.10 Recycling
- B.11 Campus Parking
- B.12 Program Units and Individuals
- B.13 Campus Planning

## II. CAPITAL INVESTMENT OR ENDOWMENT

- A. The Institutional Setting
  - A.16 CESAR — Staff, Operational Budget
  - A.17 Distinguished and Endowed Chairs
  - A.18 International Connections
  - A.19 Collaborative Study of Earth Systems
  - A.20 Expanded Number of Graduate Assistantships
- B. The Physiographic Setting
  - B.14 CESAR — Building Addition

## III. STRUCTURAL CHANGE

- A. The Institutional Setting
  - A.21 Interdisciplinary Teaching, Research and Service

# RECOMMENDATIONS

## I. IMMEDIATE IMPLEMENTATION AT MINIMAL EXPENSE

### A. The Institutional Setting

The institutional setting is defined as comprising organizational, informational, administrative, programmatic and curricular contexts in which faculty and students engage their academic pursuits. The following goals were adopted to assure a broad base of environmental studies integration of the institutional setting:

- To boost the overall University community's commitment to achieving a more environmentally informed populace; to increase local, regional, state, and national visibility of Ball State University as a model of academic/social environment and for outreach service.
- To promote awareness that the environment and environmental concerns are inextricably linked to individual beliefs and actions; to "formulate" a common commitment among administration, faculty, staff and students.
- To expand and promote interdisciplinary "discovery" of the environment and environmental issues beyond traditional boundaries of resource and policy issues; to boost the quantity and breadth of environmental issues and information woven into all Ball State University course work.
- To encourage more undergraduates to continue pursuits in graduate arenas which specialize in the environment and environmental issues; to provide recognition in graduate level education of the priority of environmental issues and opportunities.
- To demonstrate an elevated commitment to environmental curriculum at BSU as a "model" environmentally sustainable community; to increase the import and export of environmental problem solving knowledge across international boundaries.

**Objective: A.1 Modification of the University Mission Statement**

- The Committee recommends that the University Mission Statement be modified to reflect a formal commitment by the University to environmental issues.
- Rationale:* The revised mission statement would indicate that the University is in tune with the future and that, in fact, students attending Ball State will gain in terms of heightened environmental literacy. Modifying the University Mission statement will provide a leadership directive to all colleges and departments with regard to their own curricular development efforts and to students with regard to their fit into this emerging future.

**Objective: A.2 Information Clearinghouse**

- The Committee recommends that a more coordinated effort be undertaken to catalogue, archive and make accessible / environmentally-related education materials and background information. Such effort should include the following:
  - All contracts for outside speakers, e.g. Provost's Lecture Series, UniverCity, Europe Year, etc., whenever possible, should be written to include clauses providing Ball State University with the right to tape lectures for educational purposes.
  - Any video taping done by the University Media Services for its institutional "clients" should require a sign-off from Bracken Library so that a centralized listing of audio and video tapes on campus, including those outside of Bracken library, be established.
  - A staff person or graduate assistant in some central University-level office should inventory videotapes with environmental content (made locally or purchased) in the colleges and departments by periodically requesting such information from deans and chairs. This office also would update the list of tapes and environmental speakers by periodically checking the master list in Bracken Library. Alternatively, an environmentally concerned faculty member in each relevant sub-unit could report on such holdings.
  - A concerted educational campaign should be directed to encourage advance reportage of all future speakers, panels, conferences, field studies by campus organizations and other activities with an environmental content. Some sort of newsletter reporting these events to the university community should be established. It might take the form of a 'green' insert in Campus Update, an electronic bulletin board over the VAX or any other innovative format.

- Rationale:* The most readily usable resource is the body of annual activity sponsored by or administered through the university. A central clearinghouse for inventorying materials from such endeavor can serve the added function of promoting on-going use of the informational content.

**Objective: A.3 External Community Research Opportunities**

- The Committee recommends that targeted outreach be undertaken through political and business internships, town/gown meetings involving faculty and students, League of Women Voters, Partisan Political Offices, union offices, etc.
- Rationale:* The university's role in "serving" the larger aggregate Muncie community needs to be developed. Students in some departments, to varying degrees have been able to fill this kind of niche but, in fact, more linkage capitalizing on environmental issues could readily be made. Particular linkages could be through Teachers College in its teachers training efforts and similarly through the Center for Economic Education in the Business College. In addition, connections can be made through state and federal agencies. (e.g. Indiana Department of Environmental Management, Department of Natural Resources, State Geological Survey, etc.; U.S. Department of Interior, Fish and Wildlife Service, Food and Drug Administration, Environmental Protection Agency, etc.).

**Objective: A.4 Faculty, Convocations to Encourage Faculty Participation in the Environmental Arena**

- The Committee recommends that those faculty who responded positively to the environmental questionnaire distributed by the Committee, other interested faculty, and staff and student organizations interviewed by the Committee, be brought together in some formal way. The purpose would be to discuss integrating and promoting collaborative as well as discipline-specific environmental research and teaching as a means to undergird more effective curriculum development.
- Rationale:* This will serve several purposes: a) it will promote broader University awareness; b) it will provide the kind of critical mass that will attract additional faculty to this venue; c) it will lay foundations for new programmatic initiatives; and d) it will provide a forum by which to design and to monitor ongoing additudinal / behavioral inventories of the positive impacts of this new environmental thrust.

**Objective: A.5 Faculty Research and Teaching Incentives**

- The Committee recommends that summer funding be provided to enable faculty to modify course syllabus materials, engage in readings, and conduct research necessary to find a more inclusive environmental view in course offerings. A designated number of summer slots should be set aside per college to encourage a broad base of such course work development.
- Rationale:* Faculty find it difficult to make time to step outside their discipline to investigate environmentally-related materials as they might impact course content. Moreover, such initiative tends to go unsung and is without corresponding support among colleagues. Assembling a group specifically supported to undertake such work would not only eliminate the sense of risk and uncertainty but would build the cadre of faculty needed to engage the collaborative potential.

**Objective: A.6 Faculty and Staff Reward System for Contributing to Environmental Improvements on Campus**

- The Committee recommends that a formal mechanism be created for rewarding faculty and staff for suggesting or contributing to environmentally benign measures undertaken, particularly when these measures result in substantial financial gain to the University.
- Rationale:* Faculty and staff are not now formally encouraged to contribute their ideas to the University regarding environmental or management issues. There are few mechanisms by which faculty or staff can send ideas “up stream”. Thoughts should be solicited more widely on how the university might become a better steward of its properties, a more efficient user of resources, or in general terms, offer better environmental management.

**Objective: A.7 Develop Environmental Studies Options**

- The Committee recommends that an Environmental Studies minor be created. It should be interdisciplinary and interdepartmental and so encourage the maximum cross fertilization for students interested in exploring those aspects of “environment” which are beyond the traditional information content of their major area.
- Rationale:* This interdepartmental minor could be jointly administered by appropriate units presently on campus (e.g. Natural Resources, Geology, Biology, etc.). This minor would emphasize the social science/policy; arts and humanities; and sociological/behavioral aspects of “environment” as both a valuation as well as a technical knowledge base. This minor might be structured to include a requirement for student attendance at a designed number of environmentally-related extra curricular functions (e.g. public lectures, video and film presentations) or participation in on-going environmentally-related programs (e.g. volunteer organizations or specific campus employment).

**Objective: A.8 Create Environmental Ethics Course**

- The Committee recommends that an Environmental Ethics course be created and housed in the Philosophy Department. This course might eventually become a recommended General Studies elective and required in the Honors curriculum. Such a course should be integrated into a variety of majors as diverse as the physical sciences, education and the arts.
- Rationale:* Much of the debate on environmental values and issues centers on the ethics of individual and collective actions. Providing a formal course in this arena would aid existing curricula in broadening their respective students’ exposure and could fulfill requirements of accreditation agencies (e.g. The American Assembly of Collegiate Schools of Business’ requirement that ethics be integrated into the business curriculum).

**Objectives: A.9 Line-Item Financial Support for Student Organizations**

- The Committee recommends that a more formal, consistent and dependable underwriting be provided for student organizations who take an interest in specific environmentally-related projects.
- Rationale:* From one academic year to the next the support levels range widely. Specific targeted descriptions of purposeful activity could be made available by University senior staff to student organizations who seek funds to undertake activities in this arena in a responsible manner. A long-term pattern of development and growth can then occur.

**Objective: A.10 Counseling for Prospective Graduate Students**

- The Committee recommends that graduate program information be formally packaged and made available to students. This could take the form of brochure(s), poster(s), electronic kiosk(s) and database(s) or other forms of dissemination.
- Rationale:* Students need access to a broader information base than is presently available. The Committee uncovered a number of significant graduate level educational opportunities (e.g. internship and research support from Physical Plant, state agencies such as DNR, IDEM, and academic programs across the nation.). The critical need is for a computer-based search capability as complement to a centralized information clearinghouse or career center to allow students to discover and access such graduate level training both at Ball State and elsewhere. Gathering of a comprehensive listing of environmental programs will provide a better lead to faculty with regard to what degree programs or departmental offerings might be utilized in order to prepare students for graduate level opportunities and/or employment at other institutions.

**Objective: A.11 Redesign Graduate Assistantships**

- The Committee recommends that environmental issues be targeted for Graduate Assistantship support.
- Rationale:* Although it is recognized that assignment of Graduate Assistantships is no longer based on “slots” but rather on funding and that the financial support provided in this arena has been decentralized, the Committee recommends the reassignment or designation of a sizeable number of Graduate Assistantships campus-wide to support Environmental Studies activities. Financial support of this kind is provided in many universities and departments across the country by industry-funded graduate fellowships/scholarships.

**Objective: A.12 Target and Build Stronger and More Permanent International Connections**

- The Committee recommends that funding be made available for Ball State undergraduate and graduate students to enable travel to a university or scientific institute in another country.
- Rationale:* By participating in research projects with the host institution, students can gain a first-hand appreciation of environmental issues in the host country and learn alternative methods of addressing such issues (e.g. environmental contamination, waste management, environmental education, wildlife biology, etc.). As one example the Monterey Technical Institute located in Monterey, Mexico has expressed a serious interest in both student and faculty exchanges with Ball State University (as have officials in Costa Rica). Assistance from the International Programs Office should be solicited in preparing such endeavors, and external support sought through the Offices of Academic Research and Sponsored Programs.

**Objective: A.13 Direct Environmental Education Challenge to Student Affairs**

- The Committee recommends increased efforts to bring Student Affairs into the environmental arena. This would include dorm programs and activities, film series, speakers bureau, dorm life, cafeteria, and other activities supported by this unit.
- Rationale:* Ongoing program delivery provides a ready opportunity for targeting environmental education. Either by individual event or year long themes (e.g. Europe Year, Wellness) informational content can be selected to highlight environmental matters.

**Objective: A.14 Enhanced Collaborative Faculty Efforts Including Workshops and Targeted Funding**

- The Committee recommends that collaborative workshops, symposia, alternative class scheduling structures and/or credit, or other forms of encouragement be arranged to enable faculty of diverse (teaching or research) experience to be linked together to “feed off” one another’s expertise regarding environmental topics.
- Rationale:* Collaboration and interchange is more readily achieved through explicit program support. Such backing also relieves some element of risk-taking otherwise not readily rewarded by the faculty promotion/tenure/compensation system.

### **Objective: A.15 Enhanced Faculty Research Opportunities: Workshops and Funding**

- The Committee recommends that the Office of Research and Sponsored Programs be asked to sponsor several workshops designed to enable faculty to fashion disciplinary or multi-disciplinary funding proposals in environmental studies.
- Rationale:* Targeted workshops which reach beyond grantsmanship and deal directly with changes in the national research funding trends will more properly arm faculty to differentiate the more typically discipline-specific from the emerging collaborative opportunities for developing funding proposals.

## **B. The Physiographic Setting**

The physiographic setting is defined as comprising the “objects” of campus resources including buildings, grounds, and furnishings which are used to support the academic and extra-curricular activities of the University community. The following goals were adopted to focus attention on the immediate campus environment and related issues as a microcosm the larger environmental picture. The university community is in a position to reveal its global understanding and commitment through a demonstrated local managerial and educational stewardship.

- To direct changes in the campus setting which more clearly demonstrate a sound and healthy “model” society and environment, reducing the human/nature schism typically associated with an urbanized (campus) setting.
- To enhance the campus as an environmental education resource making it more accessible to resident and visiting individuals, stimulating connections and day-to-day dialogue on critical environmental issues.
- To broaden the spectrum of advice associated with solving campus environmental problems.
- To boost financial support for student organizations and programs which directly improve the overall campus environment. To increase the utilization, visibility and interdisciplinary research and learning options available at off-campus laboratory sites.

**Objective: B.1 Model Environmental Practices**

- The Committee recommends that the University adopt a long-term strategy for becoming recognized as a premier environmental community, based on the extent to which it makes use of the campus environs as a model of educational-setting management.
- Rationale:* The continued investment in the campus physical plant especially the grounds improvements, provides a ready (funded) platform for this initiative.

**Objective: B.2 Model Environmental Policies**

- The Committee recommends that the University establish policies for conduct and administration of its environmental affairs which are exemplary and that these policies be made available in published form.
- Rationale:* Publication of such policies is an additional means of expressing the seriousness and long-term dedication of the institution to sound environmental stewardship. Such public disclosure helps to frame debate and structure faculty/staff/student participation.

**Objective: B.2.1 University Senate Oversight**

- The committee recommends creation of a senate committee in cooperation with faculty of recognized expertise or interest to oversee the preparation of policy and coordination of campus environmental initiatives. This senate committee would be distinct from the Master Planning and Facilities Committee referenced in the Faculty Handbook section 6 page 9.
- Rationale:* The issues to be addressed in such appointment would include but not be limited to: proper use of non-biodegradable and toxic chemicals when appropriate, burning low sulfur coal, the practice of Low Input Sustainable Agriculture (LISA) techniques on University rental farm properties, the use of more fuel-efficient and alternative-fuel vehicles purchased for the University fleet, more environmentally sensitive storm water management systems and on-site water purification, employment of energy and material conservation practices in the construction and management of the physical plant including dormitories, and the use of recycled and recyclable materials in day-to-day operations, including the possibilities of methane production for vehicles by bio-digestion of kitchen waste. Incentives should be made available to reduce faculty/staff/student auto dependencies; and a bicycle circulation scheme to separate pedestrians and vehicles should be devised.

**Objective: B.3 Campus Settings as Environmental Teaching Tools**

- The Committee recommends that future development of the campus physical facilities be more tailored to the environmental teaching and research functions of faculty and students by inviting appropriate faculty into the planning stages for new developments of the campus, including lighting, ground water monitoring wells, walking and bike paths.
- Rationale:* It is clear to members of the Committee that over the last decade the University has made major efforts to modify, improve, and restructure its campus environs. Ranging from the relocation and development of parking facilities with integral shuttle bus service to the lamping, paving, forestation and general grounds enhancement, the environment is clearly of paramount importance to the University. It is recognized that such physical improvements provide a “lasting impression” to parents, students, alumni, community residents and state officials. Yet, progress can still be made in improving environmental education opportunities within the campus environs.

**Objective: B.4 Promotional Efforts**

- The committee recommends that current and proposed environmental improvement programs be made more visible through orientation tours.
- Rationale:* Orientation days and on-campus tours by prospective students and their parents, offer the most effective way to disseminate information about the university’s environmental practices and stimulate interest in environmentally-related educational programs. In general, the university would be well served by making more public its efforts to enhance the campus environment in ways which more completely support healthy, natural ecosystems within the quasi-urban settings.

**Objective: B.5 Physical Plant Teaching and Research Opportunities**

- The Committee recommends that an inventory of research opportunities on campus be provided to the faculty body and that effort be made to stimulate such linkages by the identification of special funds for use by the Physical Plant.
- Rationale:* Numerous teaching and research opportunities were uncovered in interviews with representatives of the Physical Plant. More effort must be made to link available applied research opportunities to both faculty and high caliber students. The Undergraduate Fellows Program is a logical target of connection. Graduate students could benefit as well.

**Objective: B.6 Property Manager for Outlying Properties**

- The Committee recommends that a full-time property/program manager be employed to reside at the house located on the Hults Environmental Learning Center property and oversee the use of this and other outlying properties.
- Rationale:* A portion of this individual's salary could be provided in the form of free rent. The primary responsibility of this individual would be to develop and orchestrate programs, host educational and research activities developed by various departments and/or other units on campus, as well as primary and secondary school groups, and members of the community at large. Creative academic activity on these outlying properties could thus be increased and recognition for this "extended campus" could be achieved. Moreover, increased support for the environmental learning center concept would broaden the audience beyond that of faculty, student and staff and engage constituencies of the entire East Central Indiana community in educational outreach (e.g. YMCA, Mounds State Park, Children's Museum, Ball Corporation Headquarters, etc.).

**Objective: B.7 Kiosk Information**

- The Committee recommends that information about events and programs be disseminated using two kinds of public information kiosks — the existing cylindrical kiosks presently placed around campus for spontaneous contributions (announcements, posters, etc.) and electronic kiosks similar to those available at the Student Center for displaying general information about Ball State. As an example of the range of detailed content to be included, a sample cognitive map has been provided on the page opposite the Executive Summary.
- Rationale:* Issues change and events are frequently organized around contemporary developments. At the same time interactive access to a database on university programs and facilities is critical to establishing a sense of tradition and ongoing commitment.

**Objective: B.8 Database Access**

- The university should join a computer network, such as “Econet” or “GAN” and subscribe to the indices of the C-SPAN video archives.
- Rationale:* Such a broad array of information networks are in place that it is foolish to “re-invent the wheel”. In addition, access to these national information nets provides an outlet for telling of the university’s unique efforts.

**Objective: B.9 Increased Support for Forestation Committee Activities**

- The Committee recommends that information be more forthcoming on the operation of the forrestation program.
- Rationale:* The Committee supports the work of this group and encourages broader participation by the University community. Sufficient information is not reaching the faculty and student body regarding the accomplishments of this Committee. This needs to be promoted more forcefully and could serve faculty and students seeking on-campus research opportunities. It also provides for “use of the campus as a teaching tool” for addressing environmental issues. It may serve as the best first step to be undertaken in that regard. It is also an exceptionally effective organizational and operational structure on which other programs may be modeled.

**Objective: B.10 Increased Support for Recycling Committee Activities**

- The Committee recommends that additional support be provided to this program. This program has received considerable attention on-campus.
- Rationale:* Financial support is necessary to underwrite a permanent full-time Recycling Coordinator position. A person so designated would be able to provide this program the attention needed. It is critical that the University embark on a more forceful support in this area. The Committee recommends further that a voluntary “nickel per ream” surcharge on paper purchases by budgetary units be endorsed by the University faculty.

**Objective: B.11 Increase Support for Campus Parking Issues/Policy Endorsements**

- The Committee recommends that specific restrictions on freshman parking and information promoting bicycling and use of shuttle buses be developed. It is further recommended that no additional conversion of university properties to parking spaces occur. The Committee recommends that the university adopt and enforce policies on vehicular travel through the campus. Freshman parking should be banned.
- Rationale:* Parking emerged as one of the primary issues of debate among members of the committee. The committee supports the efforts of the new Traffic and Safety Chief to develop new parking regulations, but feels these don’t go far enough. The faculty and student body as a whole are not that well informed regarding the evolution of campus planning and parking policy. Parking facilities improvement has been “going on all around us” for some time. A heightened attention, coupled with minimal information, provides for confusion and frustration on the part of the faculty and student body.

**Objective: B.12 Increase Support of Existing Program Units or Individuals**

- The Committee recommends that increased support be provided to those departments and centers or those individual faculty in other units which have traditionally embraced environmental or related issues.
- Rationale:* Mechanisms are not in place to recognize or formally expand support on a routine basis for those already engaged in environmental education and research. These program units and individuals will function as a core to the university initiative if given further encouragement and support.

**Objective: B.13 Increase Support for Campus Planning with the Intent of Making Educational Settings**

- The Committee endorses this approach and recommends that current professional consultants (Rundell, Ernstberger and Associates) be asked to work more directly with faculty groups to address continued efforts and broadened opportunity for using the campus environs as environmental teaching settings.
  
- Rationale:* Present campus planning reflects some sensitivity to environmental concerns. In part the process influences the opportunity for broadening such emphasis. Cultivating University community participation will expand this. Environmentally concerned faculty should be brought into the University planning process formally and at the earliest possible step in the procedure.

## II. CAPITAL INVESTMENTS AND ENDOWMENTS

### A. The Institutional Setting

#### **Objective: A.16 Center for Environmental Science and Applied Research (CESAR) - Staff and Operational Budget**

- The Committee recommends that legislative funding requests be submitted to underwrite the cost of constructing a new environmental studies unit called CESAR. The CESAR proposal has been included in the University planning process for several years. The original rationale for this unit is included in Exhibit C.
- Rationale:* Direct legislative funding would further extend state level awareness of the university's initiatives in environmental education and research.

#### **Objective: A.17 Distinguished and Endowed Chairs**

- The Committee recommends targeted solicitation of long-term financial resources in support of environmental studies.
- Rationale:* The University has had a very successful capital campaign. Environmental studies offers a new venue for soliciting further support. (see example in Exhibit C) To the extent that philanthropist(s) — whether individual or corporate — might recognize the University's use of its environment as a teaching/research setting, and acknowledge the broad front of initiatives and programs undertaken during the short-term implementation phase, a foundation is laid for winning long-term capital endowment.

#### **Objective: A.18 International Connections**

- The Committee recommends that the University market its environmental programs to attract visiting faculty and students.
- Rationale:* A long-term benefit of the proposed strategies would be to increase the import and export of exchange students and faculty. Foreign "environmental scholars" brought in as visitors would enhance the exposure of our students to world scale perceptions and understandings. Foreign students would continue to increase the mix of cultural exchange with our students. In like fashion, faculty

and students from Ball State “exported” to foreign settings for purposes of first hand experience, serve the ambassadorial role while “learning by doing”.

**Objective: A.19 Collaborative Study of Earth Systems**

- The Committee recommends that, in addition to their role in fostering research which crosses disciplinary lines, CESAR serve as agent to promote interdisciplinary teaching of environmental issues.
- Rationale:* Because these issues inherently cross the boundaries of the traditional academic disciplines, effective courses and curriculum development for them require that the University provide funding for faculty time to be devoted to educational activities involving faculty from different departments and colleges. CESAR should have three full-time faculty slots available to support interdisciplinary education. These slots can be filled, for a limited time period, by full-time faculty from various departments in the university or by visiting professors.

**Objective: A.20 Expanded Number of Graduate Assistantships**

- The Committee recommends that a significant number of graduate assistantship additions be dedicated to environmental study topics. Growth in graduate assistantship slots is presumed to be a necessity in the future; linking such additions to environmental studies lays the foundation for sustained interest in environmental matters.
- Rationale:* Support for graduate stipends can be used to “advertise” and draw attention to the University’s dedication to embracing environmentally-related education and research.

**B. The Physiographic Setting**

**Objective: B.14 CESAR — Building Addition**

- The Committee recommends construction of a facility programmed to support the educational and research objectives of this new administrative Center.
- Rationale:* Construction of a facility to house CESAR — whether building addition or new stand-alone structure — would provide substantial identity to this endeavor.

### III. STRUCTURAL CHANGE

#### A. The Institutional Setting

**Objective: A.21 Interdisciplinary Teaching, Research and Service**

- The Committee recommends a staged shift to greater emphasis on and accommodation of interdisciplinary work.
  
- Rationale:* The University generally embraces a traditional model related to promotion, tenure and merit evaluations (which to some extent influences course/curricular content). This model encourages measurable, short-term projects that result in refereed presentations or publications as well as tightly structured and measurable course content agendas. Yet, environmental issues are often complex, sometimes cumbersome, interconnected and cross-disciplinary as are applied course work, environmental projects and learning situations; if faculty respond by participating in interdisciplinary work or changing direction in their research and course content emphasis to embrace these more lateral inclusions they may run the risk of not being fully understood or supported by their Department or College. Through policy, collective commitment and academic leadership the University as a community of administrators, faculty, staff and students must assist in resolving this dilemma in order that the environmental awareness, activities, image, actions may be more freely and quickly realized.

## IMPLEMENTATION MATRICES

*The following pages provide, in matrix form, a listing of possible participants in the implementation of each of the committee's recommendations. Although these persons have not been contacted with regard to the 'green' strategy, they are known to be interested and/or by dint of university responsibility are logical choices for participation in strategy implementation. These names, however, are considered only a starting point; it is recommended that additional persons be drawn into this process.*

## IMMEDIATE IMPLEMENTATION -- INSTITUTIONAL SETTING

	Off-Campus Entities or Interests	University Office	College/ Department	Program Unit Standing Committee	Faculty Professional Staff
<b>A.1 University Mission Statement</b>	Prospective Students	Presidents Office Senior Staff Board of Trustees			J. Worthen W. Vander Hill R. Vedvik
<b>A.2 Information Clearinghouse</b>	Indiana State Library and Other State, Local and University Libraries ECONET GAN	FacultySenate Public Information Office Campus Update Daily News Library University Media Services			T. Smith R. Begovich G. Frankland R. Koester M. Wood E. Conn B. Flynn R. Howes
<b>A.3 External/ Community Research Opportunities</b>	State and Local Officials State Legislators State and Local Agencies	President Office of Research Public Information BSU Foundation University Advancement	Sciences and Humanities Teachers College College of Business	Center for Business and Econ Development Svcs Continuing Education Center for Economic Education	J. Pyle D. Yoho T. Costello T. Perry
<b>A.4 Faculty Convocations on Curriculum Development</b>		Office of Research BSU Foundation Provost VP Offices Deans Chairs Associate Provost			J. Pyle W. Vander Hill J. Roepke Academic Deans
<b>A.5 Faculty Research and Teaching Incentives</b>	Argonne and Other Governmental Labs/ Offices	Provost Office of Research	Natural Resources Anthropology Biology Geology	CERES	R. Koester T. Lowe J. Coffin J. Pichtel H. Roepke M. Mahan
<b>A.6 Faculty/Staff Reward System</b>		President Provost Graduate School		Copyright Committee	T. Kinghorn W. Vander Hill D. Wheeler T. Perry

## IMMEDIATE IMPLEMENTATION -- INSTITUTIONAL SETTING

	Off-Campus Entities or Interests	University Office	College/ Department	Program Unit Standing Committee	Faculty Professional Staff
<b>A.7 Environmental Studies Options</b>			Natural Resources, Political Science, Philosophy, Sociology	UEC	D. Wheeler
<b>A.8 Environmental Ethics Course</b>			Philosophy Sociology Management Science Marketing Natural Resources	UEC	P. Miller G. Throop C. Mortensen
<b>A.9 Line-Item Financial Support for Student Organizations</b>		VP Business Affairs Provost Dean of Students		Student Environmental Coalition Common Ground Student Association NR Club	D. McConkey B. Jones Faculty Advisors D. Mikesell
<b>A.10 Counseling for Prospective Graduate Students</b>		Graduate School	Academic Deans Chairs	Information Clearinghouse	J. Pyle D. Wheeler
<b>A.11 Environmental Studies Graduate Assistantships</b>		Graduate School Research	Natural Resources Biology		D. Wheeler C. Mortensen C. Warnes
<b>A.12 International Connections</b>		Graduate School Provost	Natural Resources	International Programs	C. Mortensen M. Limbird
<b>A.13 Student Affairs</b>		VP Student Affairs			D. McConkey R. Hyman B. Jones
<b>A.14 Collaborative Faculty Efforts</b>		Provost	Deans Chairs		W. Vander Hill
<b>A.15 Faculty Research</b>		Research	Deans Chairs		W. Vander Hill J. Pyle

## IMMEDIATE IMPLEMENTATION -- PHYSIOGRAPHIC SETTING

	Off-Campus Entities or Interests	University Office	College/Department	Program Unit Standing Committee	Faculty Professional Staff
<b>B.1 Model Environmental Practices</b>	IDEM Muncie Clean City Oakwood Farms PAWS Cncl Grt Laks Gov's. Local Chapter Audobon Society	Physical Plant Campus Planning Committee Public Safety U. Senate Planning and Facilities Committee	Natural Resources Geology Landscape Arch.	Forrestation Committee Wellness Advising	T. Kinghorn J. Wehner W. Casey T. Taylor B. Mantock N. Vernon J. Tubey A. Winters L. Smith J. Groves T. Perry M. Haynes C. Mortensen
<b>B.2 Model Environmental Policies</b>		President VP Offices Provost	Deans Chairs	University Senate Landscape Architecture Natural Resources CERES	L. Smith R. Koester T. Lowe H. Roepke D. Hahn
<b>B.3 Campus Settings as Environmental Teaching Tools</b>	Rundell/Ernstberger Local Science Teachers	Physical Plant Campus Planning	Academic Deans Chairs Landscape Architecture Natural Resources	Christy Woods and Other Properties Honors College Undergraduate Fellows Physical Plant	T. Smith J. Pyle A. Wittig L. Smith P. Popovich R. Howes C. Mortensen
<b>B.4 Promotional Efforts</b>		President Provost Public Information Campus Update	Deans Chairs	CICS CERES	J. Worthen W. Vander Hill
<b>B.5 Physical Plant Teaching and Research</b>		Provost Physical Plant	Landscape Architecture Natural Resources Geology	CERES Wellness	W. Vander Hill T. Smith H. Roepke C. Mortensen R. Spangler

## IMMEDIATE IMPLEMENTATION -- PHYSIOGRAPHIC SETTING

	Off-Campus Entities or Interests	University Office	College/Department	Program Unit Standing Committee	Faculty Professional Staff
<b>B.6 Property Manager for Outlying Properties</b>		Business Affairs University Advancement	Natural Resources Biology Geology	Forrestation Committee Burris Lab School Indiana Academy	T. Lyon R. Spangler B. Rogers P. Popovich T. Taylor H. Saxon A. Samuelson
<b>B.7 Kiosk Information</b>	AT&T CSUI	Public Information Physical, Plant (All Units)	CICS Academic Deans Chairs VIS	Public Information	R. Begovich T. Smith B. Flynn R. Steele
<b>B.8 Database Access</b>		VIS CICS Computing Services		CICS	R. Steele B. Flynn C. Fueling
<b>B.9 Forrestation Committee</b>		Provost VP Offices		Forrestation Committee	T. Kinghorn R. Spangler C. Mortensen
<b>B.10 Recycling</b>		President VP Offices		CERES Recycling Committee	R. Koester T. Smith M. Palmer
<b>B.11 Campus Parking</b>		Provost VP Offices Physical Plant Traffic and Safety		Public Safety	W. Vander Hill T. Smith
<b>B.12 Increase Support for Existing Program Units and Individuals</b>			Departments with Environmental Interests	Forrestation Committee Recycling Committee	R. Spangler L. Smith C. Mortensen A. Samuelson
<b>B.13 Campus Planning</b>		University Senate VP Offices Provost			T. Kinghorn W. Vander Hill R. Howes

## CAPITAL INVESTMENT OR ENDOWMENT --INSTITUTIONAL SETTING

	<b>Off-Campus Entities or Interests</b>	<b>University Office</b>	<b>College/ Department</b>	<b>Program Unit Standing Committees</b>	<b>Faculty/ Professional Staff</b>
<b>A.16 CESAR Staff and Budget</b>	IDEM EPA State Legislature Private Corporations	President Planning Council	Natural Resources Dean of Sciences and Humanities		C. Mortensen T. Taylor D. VanMeter T. Perry
<b>A.17 Distinguished and Endowed Chairs</b>	Private Donors	Planning Committee BSU Foundation President University Advancement			J. Worthen W. Vander Hill
<b>A.18 International Connections</b>		International Programs Research Office			M. Limbird J. Pyle
<b>A.19 Collaborative Study of Earth Systems</b>		Provost	Deans Chairs	Landscape Architecture Natural Resources CERES Geology Geograqphy	A. Samuelson L. Smith T. Lowe R. Koester H. Roepke A. Slack S. Keil C. Bohanon C. Mortensen
<b>A.20 Expand Number of Graduate Assistantships</b>		Provost President Graduate School			J. Worthen W. Vander Hill D. Wheeler

## CAPITAL INVESTMENT OR ENDOWMENT --PHYSIOGRAPHIC SETTING

	Off-Campus Entities or Interests	University Office	College/ Department	Program Unit Standing Committees	Faculty/ Professional Staff
<b>B.14 CESAR--Building</b>	Private Donors State Legislature	Planning Committee BSU Foundation President University Advancement	Natural Resources Dean of Sciences and Humanities		J. Worthen W. Vander Hill D. Vanmeter T. Perry

## STRUCTURAL CHANGE --INSTITUTIONAL SETTING

	Off-Campus Entities or Interests	University Office	College/ Department	Program Unit Standing Committees	Faculty/ Professional Staff
<b>A.21 Interdisciplinary Teaching, Research and Service</b>		Provost	Deans Chairs	CERES	J. Roepke W. Vander Hill

## EPILOGUE

Three models were examined for instituting greater emphasis on environmental teaching and research on the part of students and faculty; these are provided not as itemized recommendations but rather reflections on circumstance.

- 1) Students graduating from Ball State should experience the transformation resulting from greater environmental awareness while living in an environment that is itself transforming in spirit and character towards a harmony which recognizes the integration of humankind and nature.
- 2) Direct support of faculty involvement in the broadening of career should be provided; this means that the deterrent presently at work in the incentive mechanisms (i.e. market/merit system) in which faculty are more frequently rewarded for narrowness of focus and buildup of “non-interactive” expertise over time should be augmented by a support system which also rewards broad-based interdisciplinary endeavors. Deans and Chairs should be directed to provide an acknowledgement in hard monetary terms of the importance of getting beyond one’s discipline or working more laterally within it to accommodate environmental issues as part of the faculty member’s expertise;
- 3) Individual faculty should be reassigned to a university-level unit or a university-recognized interdisciplinary/inter-collegiate structure. Colleges could be encouraged to create “sister college” relationships that consistently offer cross-taught courses, cross-collegiate faculty positions, shared faculty (e.g. CESAR); thus, the support for the taking of risk in both the education and research arena (i.e. broadening one’s discipline to include environmental issues, restructuring one’s focus and accommodating interaction with colleagues) would be more directly supportable in that the funds would flow through a unit that would have more sympathy for and a directive to fulfill cross-disciplinary work.

The latter option would be most cumbersome in that it signals additional administrative need, bureaucratic impingement and “top/down” resources planning and consumption. Specific recommendation(s) regarding a choice or choices among these operational models varied among Committee members. Presentation of such options raised spirited debate. This in itself is evidence of unique administrative and policy dilemmas academic institutions face as they attempt to bridge tradition to the complexities of the emerging environmentally-dominated future.

# APPENDICES

These materials are bound in a separate 3-ring binder which accompanies the written report submitted to the Provost.

## A. Inventory

- Guests
- Questionnaire Surveys
- Course Syllabus Requests

## B. Evaluation

- Subcommittee Reports
- Prioritization Forms
- Matrix Completion

## C. Exhibits

- Recommendations for Provost's Lecture Series 1992-93
- Student Questionnaire
- Faculty Surveys
- Other Institutions
- CESAR Proposal
- Syllabi of Existing Courses