

Dutta, Lakshmi

From: Smith, Randy
Sent: Wednesday, August 22, 2007 4:02 PM
To: 'bigham.1@osu.edu'; 'koontz.31@osu.edu'
Cc: Dutta, Lakshmi; Brian Winer; 'EVONNE HALASEK'; Smith, Randy; Alutto, Joe; Moser, Bobby; Newcomb, L.H. (.1); 'slotnick.1@osu.edu'; Osmer, Patrick; Myers, Brad (.7); 'dickhaut.1@osu.edu'; Platz, Matt; 'andereck.1@osu.edu'; Herbers, Joan; Beck, Paul (.9); Zacher, Chris; Gillespie, Josh; 'perry.6@osu.edu'; 'herrmann.1@osu.edu'; 'okelly.1@osu.edu'; 'daniels.9@osu.edu'
Subject: Professional Master's in Environment and Natural Resources

Jerry and Tom:

I am pleased to inform you that, based on a recommendation from the Council on Research and Graduate Studies, the Council on Academic Affairs, at its meeting on August 22, 2007, approved the proposal from the School of Environment and Natural Resources to establish a Professional Master's degree in Environment and Natural Resources. Professor Brian L. Winer, Chair of the Council, and I presented the proposal on your behalf.

This proposal will now be sent to the University Senate for action at an Autumn Quarter 2007 meeting. I will contact you with a specific date when I have it. If approved by the Senate, the proposal will need action by the Board of Trustees. Professor Elliot Slotnick, Associate Dean, Graduate School will then work with on you on review/approval by the Ohio Board of Regents.

As you know, action on this proposal was delayed from earlier this calendar year as a result of concurrence issues. At a meeting that I convened on March 15, 2007 to address this issue, representatives from colleges that have programmatic emphases on topics related to "environment", agreed that while this proposal could be supported and could move forward, protocols need to be established through the Office of Academic Affairs that lead to regular meetings of this same group to discuss plans/initiatives in this area, and an understanding and expectation that for all subsequent proposals, from any academic unit, the Council on Academic Affairs will want evidence that those units have been contacted about the development of the proposal. I will be reconvening this group of college representatives in October 2007 to implement this recommendation formally.

This message represents my formal communication with you about this proposal. Please keep a copy of the message for your file(s) on the proposal and I will do the same for the file in the Office of Academic Affairs.

If you have any questions about this action, please contact Professor Winer (winer.12) or me.

Randy

W. Randy Smith
Vice Provost



250 University Hall
230 North Oval Mall
Columbus, OH 43210-1366

Phone (614) 292-6031
Fax (614) 292-3656

June 12, 2006

W. Randy Smith
Vice Chair, Council on Academic Affairs
Vice Provost for Curriculum and Institutional Relations
203 Bricker Hall
190 North Oval Mall
Campus

Dear Randy:

The Council on Research and Graduate Studies approved the following proposals during its meeting on June 7, 2006. Attached please find a copy of the proposals as well as my correspondence with the proposing programs that may assist the Council on Academic Affairs during its review.

- Proposal for a Professional Master's degree in **Environment and Natural Resources (MENR)**
- Proposal for a Graduate Minor in Environment and Natural Resources
- Proposal for a Graduate Interdisciplinary Specialization in Singing Health
- Proposal for a Graduate Minor in Women's Studies
- Proposal for an Ohio State University-Tsinghua University Collaboration regarding the Executive Track of the Ohio State University MBA Program
- Proposal for the creation of a Graduate Interdisciplinary Specialization in Fine Arts

Please let me know if you have questions or if you require additional information.

Sincerely,

Elliot E. Slotnick
Associate Dean

Enclosures

c: Irene Mynatt

Proposal for a

Professional Master's degree in
Environment and Natural Resources
(MENR)

Submitted by

Associate Professor Tomas Koontz
School of Natural Resources

Approved by the Council on Research and Graduate Studies
June 7, 2006



210 Kottman Hall
2021 Coffey Road
Columbus, OH 43210-1085

Phone (614) 292-2265
Fax (614) 292-7432
<http://snr.osu.edu>

To: Elliot Slotnick

From: Jerry M. Bigham *J.M.B.*
Director, School of Environment & Natural Resources

Date: May 16, 2006

Re: MENR Proposal

The faculty and administration in the School of Environment and Natural Resources are highly supportive of the proposed MENR Masters Degree that has been prepared and submitted by the Graduate Faculty in Natural Resources. We believe this Degree program can fulfill an important need for additional education by professionals working in the environment and natural resource fields in Ohio and elsewhere. We would appreciate receiving guidance and constructive criticism from the Council on Research and Graduate Studies.

Please let me know if SENR administration can do anything to facilitate the review process.

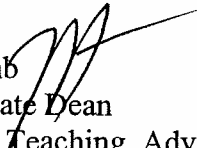
C: Tom Koontz



Room 100
2120 Fyffe Road
Columbus, OH 43210-1066

Phone (614) 292-6891
Fax (614) 292-1218

TO: Jerry Bigham

FR: L.H. Newcomb 
Senior Associate Dean
Price Chair in Teaching, Advising and Learning

DA: May 4, 2006

RE: MENR Proposal

Jerry, the College of Food, Agricultural, and Environmental Sciences is very supportive of your new proposed Masters Degree (MENR). I have reviewed it with care and commend you for the effort put into this. It fits well with your mission and the mission of the College and meets an important need for additional professional education in the State of Ohio and beyond.

If we can help in any way, please let me know.

LHN/cpp

cc: Bobby Moser
Jill Pfister
Tom Koontz

From: Elliot E. Slotnick [slotnick.1@osu.edu]
Sent: Wednesday, May 17, 2006 11:21 AM
To: Tomas Koontz
Cc: Susan Reeser; Irene Mynatt
Subject: Re: new masters program proposal

Hi Tom,

I received the letters and we will circulate them to the Committee. Thanks. Actually, the June 7th meeting should be able to work for the formal votes on both of your proposals-- the MENR as well as the Graduate Minor (which we'll take back to Committee next week). That Council meeting will also be scheduled to start at 3:30--but classes will be over by then *albeit not final exams). Hopefully you can make it, but if you can't, we would ask that some representative of your program be there to make a brief presentation (3-5 minutes) on each proposal and to answer any questions that arise from the floor.

Susan Reeser will be in touch regarding the timing of the meeting and when you would need to be there in due course.

Best,
 elliot

>Dear Dr. Slotnick,

>

>This morning I dropped off hard copies of the two letters of support
 >for our new masters proposal. I didn't realize that it would be
 >helpful for me to be present at the meeting.

>This afternoon I teach from 3 to 5 pm, so I will not be able to attend.
 >When is the Council's June meeting?

>

>Thanks,

>

>--Tom

>

>At 05:39 PM 5/16/2006, you wrote:

>>Electronic would be fine, Tom. Are you planning to be at the Council
 >>meeting tomorrow (014 University Hall) to present this and answer
 >>questions or should it go on the agenda of the June meeting? Please
 >>advise..

>>

>>Best,
 >>elliot

>>

>>>Dear Dr. Slotnick,

>>>

>>>Thanks for the e-mail and feedback on our MENR proposal. I am
 >>>attaching a slightly revised version that takes care of the NR 999
 >>>issue (we've eliminated it in favor of just NR 893).

>>>I have letters of support from the FAES Dean's office as well as from
 >>>Jerry Bigham. Will an electronic copy of these suffice, or should I
 >>>bring over the hard copies?

>>>

>>>Thanks,
 >>>Tom Koontz

>>>

>>>At 11:17 AM 5/12/2006, you wrote:

>>>>Dear Tom,

>>>>

>>>>I am writing to let you know that at its meeting earlier this week
 >>>>the Curriculum Committee of the Council on Research and Graduate

dies endorsed, in principle, your proposal for a new professional degree offering, the MENR. Before the proposal can be brought to the full Council for a vote, a few minor alterations and requirements need to be attended to.

The only substantive change sought in the proposal from the committee is the elimination of the 999 course number option for enrolling in the Independent Project associated with the program. These courses connote thesis work which is not at issue here. Rather, the 893 number should be utilized for Independent Project enrollment.

I ask you to attend to this change in the proposal and send me a promptly revised electronic copy.

Other requirements before taking this proposal to the full council for discussion and vote are the necessity for supporting letters from Jerry Bigham as your school's director and Bobby Moser as his representative from the Dean's office.

Early, we're almost ready to go forward with this. The full council meets next week on the 17th starting at 3:30. If you can provide the required letters by then we can still get you on that meeting's agenda. Alternatively, we can schedule this to go forward, with the letters and proposal revision, at the year's last Council meeting on June 7th--also starting at 3:30.

It is important that we move this forward next week or, at the latest, on June 7th, so that the summer can be utilized for continuing the processing of the proposal by the Regents Advisory committee on Graduate Study (RACGS) as well as, internally, by CAA. An alternative of getting this out of our Council in the Fall (we can't meet over the summer) seems to be needlessly wasteful of processing time.

Please let me know how you would like to proceed. Congratulations on reaching this stage of the approval process for your proposed new degree offering.

Best,
John

John Slotnick,

The Natural Resources Graduate Program has developed a proposal to offer a new professional masters degree. I'm not sure if you were involved in the prior iteration of this proposal, several years ago, but we have made substantial changes. The new program aims to serve primarily mid-career professionals working in organizations relating to environmental and natural resource issues.

Attached is the proposal passed by our graduate faculty in the Natural Resources Graduate Program, and supported by our college (Food, Agricultural, and Environmental Sciences). I am unsure of the next steps in moving forward with this proposal. Your advice on this matter would be greatly appreciated.

Thanks,
John Koontz

John Koontz, Associate Professor
Chair, Graduate Studies Committee and Academic Coordinator School
Environment and Natural Resources The Ohio State University 210
Attman Hall
21 Coffey Rd.
Columbus, OH 43214
www.snr.osu.edu/myhome/koontz.31

From: Elliot E. Slotnick [slotnick.1@osu.edu]
Sent: Friday, May 12, 2006 11:17 AM
To: Tomas Koontz
Cc: Irene Mynatt; Susan Reeser
Subject: Re: new masters program proposal

Dear Tom,

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elliott

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>offer a new professional masters degree. I'm not sure if you were
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>but we have made substantial changes. The new program aims to serve
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>Resources Graduate Program, and supported by our college (Food,
>Agricultural, and Environmental Sciences). I am unsure of the next
>steps in moving forward with this proposal. Your advice on this matter
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>

>Thanks,
>Tom Koontz

>
>Tom Koontz, Associate Professor
>Chair, Graduate Studies Committee and
>Academic Coordinator
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>www.snr.osu.edu/myhome/koontz.31
>
>Attachment converted: Macintosh HD:MENR05b.doc (WDBN/«IC») (0019F62E)

--
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**Masters in Environment and Natural Resources (MENR)
Program Development Plan**

**School of Environment and Natural Resources
College of Food, Agricultural and Environmental Sciences
The Ohio State University**

Approved by the Natural Resources Graduate Program faculty in December, 2005

1. Designation of the New Degree Program

The proposed plan is for development of a tagged, professional degree program called the Masters in Environment and Natural Resources (MENR). This program will provide an applied graduate degree for practicing professionals and others who want to enhance their professional competency in environmental and natural resource science and management. The target audiences for the proposed program include managers and technical specialists with state and federal agencies, environmental scientists and resource managers in the public and private sectors, parks and recreation personnel, teachers (K-12), interpreters, Peace Corps volunteers, and natural resource communicators.

The MENR degree is a non-thesis degree that will replace the Plan B non-thesis option currently available to students pursuing the Master of Science in the Natural Resources Graduate Program. Students wishing to pursue research-oriented careers will continue to enroll in the MS program and engage in research leading to a thesis. The MENR will be a separate degree program that students will select for its theory-into-practice orientation. The MENR will provide a balanced and rigorous program, creating valuable educational and training experiences for persons planning for or already engaged in a professional career in environmental or natural resources management, administration, or education. Students in the MENR program will extend their depth of knowledge and expertise in environmental and natural resource management beyond that acquired during Bachelor degree programs, and at the same time improve their decision-making and communication skills.

2. Description of the Proposed Curriculum

The proposed curriculum would require a minimum of 55 graduate credit hours, which is the current requirement for the non-thesis option. Because the professional degree relies more heavily on coursework than traditional thesis-based MS programs, we believe that 55 credits represent an adequate amount of exposure and preparation for a graduate degree in the absence of research. The curriculum will include specific requirements of all students (see below), but will allow enough flexibility in course selection and scheduling to meet the individual needs of students. The program will allow students to take advantage of nontraditional course formats (e.g., evening and weekend offerings,

distance-based courses, and short-course formats) as well as field experiences at F.T. Stone Laboratory, OSU's field station on Lake Erie, and the Olentangy River Wetland Research Park on campus.

Credit hours would be apportioned as follows:

<u>MNR component</u>	<u>Proposed credit-hours</u>
Core courses (4) required of all program participants	16-20
Field of study, specialization "track" courses	16-20
Directed electives	5-13
Independent project (NR 893)	8
2 seminar courses (NR880)	2

Core

The Core will consist of courses that emphasize the major paradigms and conceptual ecological and social underpinnings of natural resources management and environmental issues. Students, in consultation with their advisors, will select two courses from each of the two core areas to ensure that they appreciate the complexity of social and ecological issues in natural resource management. Substitutions, though strongly discouraged, are possible under unusual circumstances where it is not possible for a student to accommodate the course times. In these cases, students will formally petition the NR Graduate Studies Committee for approval of substitutions.

1. Environmental Natural Sciences (choose 2)
 - NR 618 Ecological Engineering
 - NR 656 Ecosystems of the World
 - NR 675 Environmental Fate & Impact of Contaminants in Soil and Water
 - NR 710 Methods in Ecosystem Science
 - NR 756 Rehabilitation and Restoration of Ecosystems

2. Environmental Social Sciences (choose 2)
 - NR 615 Environmental Risk Communication
 - NR 642 Natural Resources Administration
 - NR 752 Environmental Science and Law
 - NR 835 Ecosystem Management Policy

Field of Study

Students will decide if their interests and professional goals align more closely with either the "Environmental Natural Sciences" or the "Environmental Social Sciences" track. Environmental Natural Science students will focus on courses that build greater understanding of the natural sciences and the technical methods used to monitor, restore, and manage ecosystems and natural resources. Students opting for the Environmental Social Sciences track, on the other hand, will build competency and understanding of the social dimensions of natural resource management,

including administration and management, decision-making, policy, and education. Through careful consultation with their advisors, students will select courses within their fields of study that best support their areas of interest.

The following are examples of courses supporting different “areas of interest”:

Environmental Social Sciences

Environmental Policy & Law

NR 601 Evaluation of Environmental Impact
 NR 647 Wilderness Policy and Management
 NR 650 Water Resources Institutions and Policies
 NR 736 Public Forest and Lands Policy
 NR 752 Environmental Science and Law
 NR 835 Ecosystem Management Policy
 NR 861 Property, Land Information, and Environment
 AEDE 531 Environmental and Natural Resource Economics

Environmental Education & Communication

NR 610 Environmental Interpretation
 NR 611 Great Lakes Education Workshop
 NR 613 Methods for Environmental Education
 NR 614 Marine and Aquatic Education
 NR 615 Environmental Risk Communication
 NR 617 Aquatic Environmental Science for Teachers
 NR 715 Community Education for Environmental Issues
 NR 716 Choices for the Environment

Natural Resource Administration/Planning/Management

NR 640 Natural Resources Program Planning 1
 NR 641 Natural Resources Program Planning 2
 NR 642 Natural Resources Administration
 NR 643 Outdoor Recreation and Tourism by the Private Sector
 NR 750 Resolving Social Conflict
 NR 893 Ohio Watershed Academy

Environmental Natural Sciences

Ecological Restoration

NR 618 Ecological Engineering
 NR 675 Environmental Fate and Impact of Contaminants in Soil and Water
 NR 710 Methods in Ecosystem Science
 NR 725 Wetlands Ecology & Management
 NR 731 Principles and Applications of Forest Ecosystem Restoration
 NR 756 Rehabilitation and Restoration of Ecosystems

NR 770 Watershed Ecology and Restoration
 NR 797 Wetland and river restoration

Environmental Monitoring and Assessment

NR 601 Evaluation of Environmental Impact
 NR 626 Methods in Aquatic Ecology
 NR 627 Ecology and Management of Aquatic Invertebrates
 NR 662 Methods in Wildlife Ecology
 NR 672 Lab Methods in Soil Analysis
 NR 675 Environmental Fate and Impact of Contaminants in Soil and Water
 NR 710 Methods in Ecosystem Science
 NR 760 Ecosystem Modeling
 NR 822 Quantitative Methods in Natural Resources

Forest, Fish, and Wildlife Management

NR 620 Principles of Fisheries Ecology and Management
 NR 623 Principles of Wildlife Ecology and Management
 NR 624 Wildlife Identification and Management
 NR 625 Management of Wildlife Habitat
 NR 626 Methods in Aquatic Ecology
 NR 627 Ecology and Management of Aquatic Invertebrates
 NR 629 Ecology and Management of Wetland Birds (Stone Lab)
 NR 631 Aboriculture
 NR 635 Forest Management
 NR 662 Methods in Wildlife Ecology
 NR 725 Wetland Ecology and Management
 NR 733 Successional Dynamics of Forests
 NR 734 Forest Ecosystem Management

Ecosystem Science and Management

NR 617 Aquatic Environmental Science For Teachers
 NR 799 Current Topics in Environment and Engineering
 NR 822 Quantitative Methods in Natural Resources
 NR 725 Wetlands Ecology & Management
 NR 630 Soils of Forest Ecosystems
 NR 710 Methods in ecosystem science
 NR 680 Soil Chemistry

Directed Electives

Students will register for elective courses with approval from their advisor. Appropriate elective courses should support the student's program in environment and natural resources, and may represent additional coursework (i.e., beyond the core requirements) in either the natural or social science arena. For example, a student in the environmental

natural science track may wish to gain more expertise in environmental social sciences than what is required by the core courses.

Project

Students are expected to engage in an experiential learning project (e.g., field or lab based) to apply skills acquired in course work. Eight credit-hours of Independent Study (NR 893) should be taken while conducting the project. Examples of suitable projects include a professional paper related to their interest area and usable by a natural resource agency or organization, an outreach or Extension publication, or a review paper suitable for publication in a peer-review journal. The project can be under the direction of more than one advisor.

Seminar

Students will enroll in NR 880, Seminar in Natural Resources (or an approved substitution) twice in the program. The seminar requirement is lower than that expected of M.S. students in our program because we recognize the non-traditional status of many expected MENR students (e.g., full-time employment, commuter student), which may prevent them from participating in the afternoon course every quarter.

Final examination

As per the requirements of the Graduate School, each student will complete a Final Master's Examination, which will include a written and oral examination. The examination will evaluate the student's proficiency and understanding of his/her field of study, with emphasis on the topic selected for the student's project.

3. Administrative Arrangements

a) Student's Committee. Each MENR student will work closely with one faculty advisor to structure the program and coordinate project efforts. The advisor will be a member of the Graduate Faculty in the Natural Resources Graduate Program. In addition, the student will select an examination committee, which is responsible for administration of the Final Examination. This committee will consist of the advisor plus 2 additional faculty members who have M or P status in the Graduate School, with at least 1 of those individuals also being a member of the Natural Resources Graduate Program.

b) Program administration. The policy-making body for the MENR will be the Graduate Faculty in the Natural Resources Graduate Program. Initially, the existing Natural Resources Graduate Studies Committee will administer the program. As the program matures, however, it may become appropriate to form a separate subcommittee to deal strictly with the MENR.

c) Time to completion. The program is designed to allow completion in one year (4 quarters) of full-time work. However, many students enrolling in the program will likely do so on a part-time basis. In these cases, program completion may take 3-6 years, which is similar to timelines in other professional graduate degree programs at

OSU (e.g., MA in Education). After six years have elapsed, some courses taken earlier in the program may need to be retaken or replaced if significant advances have been made in the field of interest, to meet the objective of "state of the art skills and subject matter". The decision to retake courses will be made by the Natural Resources Graduate Studies Committee. Students completing their programs in fewer than six years will not be required to retake courses.

4. Evidence of Need

a) Employment market. There is a growing demand for professionals with expertise in natural resource and the environment. A sample of job opportunities advertised on internet databases provides some information: About 45% of the available positions in winter of 2004 specify preference for people with Master's degrees in the field, yet of those job descriptions only 26% appear to require the research expertise that would normally be obtained in our existing Master of Science degree program. Thus there is an identifiable market for individuals with advanced degrees that do not necessarily include an in-depth research experience.

Available positions within job groups entitled "Education," "Natural Resources" and "Environmental" (March 2004)

Job Source	Jobs listed	Masters required or preferred	Masters – <u>Research</u> capability implied
EcoEmploy (www.ecoemploy.com/)	84	28	2
Environmental Careers.Com (environmental-jobs.com/)	300 reviewed/ 600	185	76
Environmental Careers Organization (www.eco.org/)	>500	177	25

b) Requests for programs.

Faculty and staff with the School have received requests for a non-thesis, professional-track Masters program from primarily two clientele groups: in-service professionals and educators. The perception for many professionals is that research training is not a career requirement, while subject matter updating and enhancement, as well as having an advanced degree as a credential, are clear needs. During some years, approximately half of the requests fielded by the SENR graduate program coordinator (Andrea Trachsel) have been for non-thesis (non-research) graduate degree options in SENR.

We expect there to be a high demand for the MENR program based on participation in short-courses and non-traditional courses aimed at these clientele groups over recent

years. For example, we have been teaching short courses in wetland creation and restoration, wetland delineation, ecosystem modeling, and river restoration at the Olentangy River Wetland Research Park since 1996 and have enrolled over 300 participants in that time from almost every state in the country. In 2005 SENR faculty taught short-courses in stream measurements were in Columbus, Ohio and Monroe, Michigan for professionals in the field. Approximately 70 professionals enrolled in these two short course opportunities, and a long wait list had to be established because the demand exceeded the number of persons that could be accommodated. As another example, OSU Extension has taught the 6-month Ohio Watershed Academy for the past 6 years and served over 100 students, the vast majority of whom are in-service professionals such as watershed coordinators, public utility employees, planners, and health department professionals. Based on these recent offerings, there is a need within the state and region that is not currently being met by current programs. Many natural resources professionals in the field are seeking continuing education or other opportunities to enhance their education, learn new skills in the changing environment of their jobs, and overall further their training. It is this client base that a MENR program will best serve.

The great demand for summer courses at OSU-Columbus campus and the F.T. Stone Laboratory on Lake Erie also demonstrates the interest of educators. Teachers enroll in 1-week-long or 5-week-long courses to add science credits toward certification, and now the Ohio licensure requirements are increasing the demand for continuing education opportunities. This interest supported 10 Stone Lab courses for in-service teachers and other professionals related to environmental science and education in 2004. Many of these students (e.g., 21 students in 2003 alone) inquired about how these credits might be applied to a graduate degree program.

c) Enrollment in Precursor Program. Through 2003, the School of Environment and Natural Resources accepted enrollment of part-time students into a non-thesis program internally identified as Plan B. Since 1990, about 15% of the MS graduates of SENR have been in Plan B programs. The MENR is meant to replace the non-thesis option by meeting the needs of similar students with an applied rather than a theoretical research approach. However, it is expected that enrollment in the MENR program will be higher than that of the Plan B program. Part of the low enrollment in the past was due to the perspective of some faculty that a Master of Science degree should necessarily include a research-based thesis. Consequently, few faculty were interested in advising Plan B (non-thesis) MS students. The new designation of a Professional Degree (MENR) would clearly identify the positive and dynamic aspects of the program by giving it the distinction of a separate name and image that specifies its contributions to professional training. This shift in program status has generated much more faculty interest than the former Plan B non-thesis option.

d) Uniqueness. In Ohio, there are related but differently focused degree programs at the Master's level. Only Miami University offers a non-thesis, professional degree in Environmental Science, and this program is most similar to the MENR program that we propose. Because we are located in a different region of the state and expect that

geographical constraints are an important consideration for program selection by in-service professionals, we expect that MENR will draw a different clientele group than Miami University.

<u>University</u>	<u>Degree</u>
Ohio University	M.S. in Environmental Studies
Cleveland State University	M.S. in Environmental Science
University of Findlay	M.S. in Environmental, Safety and Health Management
University of Cincinnati	M.S. in Environmental Science (Through Department of Civil and Environmental Engineering.)
Miami University	M.En degree in Environmental Science through Institute of Environmental Sciences
Youngstown State University	M.S. in Environmental Studies

5. Prospective Enrollment

The first anticipated groups to be actively recruited to the program include (1) professionals from state and federal agencies and (2) in-service educators. An informal survey of agencies ranging from the Ohio Department of Natural Resources, Ohio Environmental Protection Agency, Soil and Water Conservation Service, and private industry has shown strong interest in this program. Many of these agencies have paid for participation in short courses offered by SENR faculty. The in-service teachers, as a group, are already engaged with our program during summer courses both at Stone Lab and Columbus campuses. Many of these teachers see a need to expand their credentials and update their skills for working in the field with their students. A poll of the teachers participating in Stone Lab courses in summer of 1999 indicated that of those without a Master's degree, 65% would consider enrolling in a program that allowed them to incorporate their field based science in meaningful pedagogical contexts such as the program can provide. Given that Ohio now requires Master's degrees for licensing, we expect that the MENR program will be an attractive option for Ohio's teachers. In addition to these two groups, we expect to attract individuals who are preparing to become Peace Corps volunteers or are returning from Peace Corps experiences with new perspectives on natural resource management. Successful programs for this group are already in progress at other institutions outside of Ohio, as well as in the Fisher College of Business, and the subject matter of many Peace Corps programs aligns closely with that of natural resources and environmental education.

6. Enrollment of Minority Students and/or Women

Increasing numbers of female students have enrolled in the SENR's B.S. and M.S. programs over the past decade. The 15-day count for Spring 2004 revealed that 43 percent of the School's undergraduate students, and 52 percent of its graduate students,

are female. Over 20% of the graduate students in Spring 2004 are minorities. SENR has a particularly good record of recruiting women into summer courses at Stone Laboratory, where female students have been the majority of summer college students every year since 1990. Effective recruitment and retention of women/minority students are expected to continue in the MENR program.

7. Faculty and Facilities Available

Offsetting program impacts. SENR faculty are convinced there are clear benefits of the MENR, particularly in terms of professional contacts, visibility within the stakeholder groups, increased student credit hours taught, and placement of students. We also see that MENR students can enrich the graduate experience of our current graduate students because MENR students are expected to bring a wealth of practical experience and different perspectives to the classroom.

We recognize that implementation of the MENR program will carry additional advising responsibilities for faculty mentors and may change the nature of certain benefits normally derived from advising (i.e., publications based on research). That said, the advising demands are substantially lower for MENR students than traditional thesis/research-oriented MS students. Although we expect that most SENR graduate faculty will participate in the MENR program at some level, we believe that a subset of faculty with strong connections to agencies will likely be most active in the program. We also see the great potential of the MENR program to engage graduate faculty that do not currently have active research programs. The MENR program will allow them to more fully participate in graduate education and mentoring without conducting formal scientific research projects.

Need for additional faculty. Existing faculty of the School will be sufficient to handle an increased advising load, and our current courses will support the curriculum. The MENR program will demand a continued commitment to offering courses at nontraditional times (e.g., evening, weekend, summer) and/or in nontraditional formats (e.g., web-based, distance-learning). Many faculty in the School are already engaged in such efforts, and we have several new distance-based or nontraditional times (e.g., week-long, summer, and/or evening courses) currently available to students. As a School, we also recognize the importance of continuing to offer summer courses at Stone Lab.

We do not expect that demand for the MENR program will exceed our capacity to advise high-quality admissible students. However, if it becomes necessary, a “cap” will be placed on numbers of students entering the MENR, based on the capacity of the faculty agreeing to advise students, the number of project liaisons and instructors to teach specific courses for the MENR students. As in the case of the MS, the School will not admit more students than we can effectively advise.