

*Gaylord Nelson*  
*Institute for Environmental Studies*

UNIVERSITY OF WISCONSIN-MADISON

May 12, 2005

**To:** Tom Lillesand, Chair, Environmental Monitoring Program  
Dean Martin Cadwallader, Graduate School  
**cc:** Environmental Monitoring Review Committee: Warren Porter, William Holland,  
Nancy Mathews, Robert Mathieu, John Norman, Peter Nowak  
**From:** Frances Westley, Director, Nelson Institute

**RE:** Response to Environmental Monitoring External Review

I would like to thank the committee for the hard work and thought they put into this review. I was impressed by the thoroughness and creativity which characterizes the report. In response to the committee's conclusions and recommendations:

1. There is no question of the very high quality represented by the work of the faculty associated with the Environmental Monitoring Program. The program has been successful at developing and placing doctoral students. It is also clear that with retirements and departures, the staffing situation for the EM Program has become urgent and that campus collaboration will be required to maintain this program.
2. As the committee points out, the competences associated with the EM program have been twofold: a) development of the science needed to create new and leading edge technologies; b) application of the current technologies (GIS/GPS) to a range of environmental issues/problems and research opportunities. There is a need, now, to work with other relevant academic units on campus, and in consultation with the Graduate School, to determine the best way to maintain this program. Unfortunately, the Nelson Institute does not currently have the resources to continue to support the EM program single handedly. It is clear that if the Environmental Monitoring program is to continue under its current auspices, new staffing is required. I would recommend that discussions with Geography, CALS, URPL and Civil Engineering, as well as the Graduate School, begin immediately to explore the interest/resource availability of these units in making the Environmental Monitoring sustainable in the future.
3. Given that the groundwork for the Professional Masters in Environmental Monitoring has already been laid, the revitalization of this program and the change of name should be considered as part of a new strategic plan for securing the future of remote sensing on this campus.

I commend the leadership, faculty and staff of EM for the quality of the work they have done, for the efforts in maintaining this quality in the face of shrinking resources. I wish to express my appreciation to everyone who participated in this review.



ADMINISTRATION

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May 12, 2005

TO: Linda Graham, Chair, Water Resource Management Program  
cc: Dean Martin Cadwallader  
Sharon Dunwoody  
Water Resources Management Graduate Program Review Committee:  
Paul Zedler, Teri Balsler, Hardin Coleman, Peter Nowak, Al Shea

FROM: Frances Westley, Director, Nelson Institute for Environmental Studies

RE: **Water Resources Management Review**

I would like to thank the committee for the hard work and thought they put into this review. I was impressed by the thoroughness and creativity which characterizes the report.

In response to the the committee's conclusions and recommendations:

1. Program Design: The program design described as original when it was first created sounds equally so today. The emphasis on an interdisciplinary applied project, involving organizations in the community, is exemplary from the point of view of the Nelson Institute mission. The committee, however, has recognized several weaknesses in the program including time for completion and follow up of report and the lack of interaction between program cohorts. A redesign is suggested which deserves careful consideration. The weaknesses associated with the project may well be addressed by moving it to the first summer. However, it should be noted that the earlier placement means that students will lack some of the coursework that might help make the product more useful, first year students sometimes are unfocussed on what they really want to study in WRM and they may lack the experience to be as helpful to the "team" and client. As much as possible, these concerns should be taken into account (and perhaps addressed through additional training in the first year). Students should first acquire the 'toolkit' to be able to solve problems that will be addressed in the project.

While the Nelson Institute is currently undertaking a review of the structure of teaching programs as a whole, it seems likely that an "applied stream" will be identified. I would suggest that the recommendations from this report, including the redesign suggestions, be used as a template for redesigning the non-thesis track in all graduate programs associated with the Nelson Institute. Therefore I would urge the program chair to consider moving forward on implementing the redesign ideas suggested in the review.

2. Student Support: The need for financial support for all Nelson Institute Students is pressing. Fellowships are particularly urgently needed for students associated with the thesis track in all programs, in particular our doctoral students. My own feeling is that professional master's students, such as those in WRM, need support of a different form: internships, work-study arrangements and placement support which will simultaneously provide financial help while in school and will secure an excellent placement upon graduation. That having been said, however, I would agree with the committee that we run the risk of losing excellent students if we don't address this issue in the near future. I would urge the academic and program chair to consider all options above in the light of a possible program redesign and suggest specific strategies for addressing this problem.

On a different but related track, the need for a greater sense of community, as underlined in this report, should be addressed. We have already considered starting career session gatherings sponsored by the Nelson Institute. These would occur once a semester for each program and would be informal get togethers with food and drink, designed to bring together students, faculty and alumni of each program for exchanges around career futures. More is needed and I would encourage the WRM program chair and staff to assist in creating a more active student government for the Nelson Institute, which, once in place, could take on some further responsibility for community building events.

3. Faculty Support and Advising: Given the dependence on the WRM student's advisory committee and supervisor on the overall success of the program, every effort must be made to continue to seek out and build relationships with new interested faculty at the University. This will become even more important if the project is moved to the first year.

In closing, I would like to commend the current and past leadership, faculty and staff of WRM for the quality of the work they have done and for the efforts in maintaining this quality in the face of shrinking resources. I wish to express my appreciation to everyone who participated in this review.



Director  
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## UW-Madison Program Reviews: Summary of Reviews Reported in the Past 10 Years

Reviewed in Past 10 Years?	MAJOR TITLE	Year of Most Recent Review	Review Type	Review includes:				
				BA/BS	SED	Masters	PhD	Prof.
<i>GAYLORD NELSON INST FOR ENVIR STUDIES</i>								
<input checked="" type="checkbox"/>	228 CONSERV BIO&SUS DEV	1998-99	Joint Review	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	413 ENVIRON MONITORING	<del>1988-89</del> 2004-05	<del>Joint Review</del> Institutional completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	593 LAND RESOURCES	2002-03	Institutional	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	989 WATER RESOURCES MGT	<del>1985-86</del> 2004-05	Institutional completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No reviews scheduled for 2005-06

## **Gaylord Nelson Institute for Environmental Studies 2004-05 Annual Report on Academic Program Assessment**

After two years of interim leadership, the Nelson Institute has new leadership in place and is moving aggressively to evaluate and evolve its academic and research activities. We have conducted a range of academic assessment activities in the past, but they have been more *ad hoc* than coordinated. During the next year, we will develop an comprehensive assessment plan for the institute in conjunction with a review and overhaul that is already underway. This activity has already entailed extensive data gathering, personal interviews, numerous meetings, and two mini-retreats held this past spring. Our mission and program review will continue this fall with a third, full-fledged retreat scheduled for 16-18 September. Key objectives of this self-assessment include refining the institute's mission and producing a new strategic plan.

Our plan has not been updated in the past year; it will be replaced in full as a result of our ongoing strategic planning activities.

While our overarching scheme for assessment is still in development, we have undertaken some assessment activities during the past year. Upon her arrival, Frances Westley, our new director, conducted a series of systematic interviews with our faculty and organized our first mini-retreat in March 2005. The results of the interview process were vetted with the faculty and provided the foundation for this retreat.

These activities in turn provide the foundation for our second mini-retreat. That retreat was facilitated by Michael Quinn Patton and was used to define measures of excellence for the Nelson Institute in interdisciplinary teaching, research and outreach; promoting understanding of environmental issues from campus to global; and identifying and resolving environmental problems from campus to global. The second phase of this self assessment was carried out by a group of graduate students from the institute who were hired to meet with chairs of programs, students in programs, research center directors and researchers as well as individuals involved in significant outreach endeavors and to facilitate the application of the scales to the programs, projects and processes currently associated with the Nelson Institute. This exercise has been completed and we are currently aggregating the data to provide a general map of the strengths and weaknesses of the Nelson Institute. The results of this activity will serve as input for the retreat this fall. We will then develop our academic assessment plan within the context of our refined mission and strategic plan.

In addition to the above-described self-assessment, the Nelson Institute partnered with the Robert Wood Johnson Foundation to conduct a 2-day workshop focused on developing transdisciplinary curricula. The results of that workshop will support and invited full submission to the IGERT program and provide a framework for future assessments. They will be integrated into our ongoing strategic planning process as well.

2. Student Support: The need for financial support for all Nelson Institute Students is pressing. Fellowships are particularly urgently needed for students associated with the thesis track in all programs, in particular our doctoral students. My own feeling is that professional master's students, such as those in WRM, need support of a different form: internships, work-study arrangements and placement support which will simultaneously provide financial help while in school and will secure an excellent placement upon graduation. That having been said, however, I would agree with the committee that we run the risk of losing excellent students if we don't address this issue in the near future. I would urge the academic and program chair to consider all options above in the light of a possible program redesign and suggest specific strategies for addressing this problem.

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Two of our graduate programs recently completed 10-year reviews and our undergraduate program is being evaluated through a grant from the Assessment Council. These activities bring all of our academic programs into compliance with the required 10-year cycle.

The Water Resources Management Program conducted a 10-year review that included a survey of alumni and a survey of summer workshop clients from the last ten years (all students must participate in a summer group practicum in lieu of a thesis; workshop clients have included communities, NGO's, department of natural resources, etc.). A summary of the results of the alumni survey is included below:

1. Approximately 15% of the WRM alumni completed a second degree.
2. 95% said the WRM program either met or exceeded their educational goals
3. 66% said the workshop either met or exceeded expectations.
4. 87% said WRM had either met or exceeded expectations in preparing them for a professional career. Less than 4 months was the average time to first job.
5. 49% responded yes when asked if they would enroll in WRM again.
6. Over 90% felt the information they received while applying and while enrolled was either useful or outstanding.
7. 77% felt workshop support was sufficient while 23% felt it was insufficient.
8. 36% responded that the handbook was useful but 41% seemed unsure about what the Handbook was.
9. 77% did not have financial support prior to entering WRM.
10. 44% got support after they arrived but 44% did not.
11. 8% got support thru GNIES, 90% through other sources with 1.5 years being the approximate duration of support.
12. 23% responded that WRM was excellent "as is" while 62% said some changes were needed.

The WRM program chair has identified several priorities as a result of these surveys including securing more financial support for graduate students, identifying workshop opportunities further in advance of the workshop date, and investigating the possibility of having the workshop project produce not only of a report useful to local sponsors, but also a publication in a peer-reviewed journal which would lend greater legitimacy to the study's results, promulgate them, and raise the profile of WRM, with the goal of increasing enrollment of highly qualified students and fostering graduates' careers.

The program review for Environmental Monitoring which included an alumni survey showed that, in general, the Program continues to be highly successful. It attracts a high quality applicant pool; a high percentage of its students receive financial support during their studies; most students in the Program finish their degrees in a reasonable time; graduates from the Program readily find employment in the public, private, academic, and not-for-profit sectors; and alumni satisfaction with the program is high. The recently established Professional Option in Remote Sensing and Spatial Information Management has proven to be attractive and beneficial to mid-career professionals and recent undergraduates who have strong backgrounds yet lack marketable technical skills in today's workplace.

Last summer the Nelson Institute was awarded a grant by the University Assessment Council for the purpose of evaluating the Undergraduate Program in Environmental Studies. As a part of this assessment project, we surveyed via mail and email our current students, faculty, and alumni. Substantial questionnaires about potential strengths and weaknesses of the program were sent out and answered. Included were questions about the usefulness of the program towards applying to graduate school and employment. We currently are completing the analysis of this data and we anticipate that our report will be finished later this summer.

Activities for the coming year include:

- *Develop comprehensive assessment plan for the institute* – This will be lead by our Associate Director and staffed by our senior student services coordinator and assessment council representative, Hope Simon. We will use outcomes from the faculty/staff retreats and consult with the various academic program committees and staff in creating our plan.
- *Complete the analysis of the undergraduate certificate program evaluation* – This will take place in the context of our ongoing discussion of how our undergraduate offerings should be organized.

# Nelson Institute for Environmental Studies

## Direct Indicators/Measures

## Indirect Indicators/Measures

Major/Academic Program	Level	Has an assessment plan.	National Exams	Local Exams	Capstone Course(s)	Embedded Testing	Student Portfolios	Thesis or Dissertation	Pre-Test/ Post-Test	Other Milestone Evaluation	Student Surveys	Exit Surveys	Alumni Surveys	Employer Surveys	External Surveys	Other Indirect Measures
228 Conservation Biology and Sustainable Development	Graduate	N														
413 Environmental Monitoring	Graduate	N											2003-04			
593 Land Resources	Graduate	N														
989 Water Resources Management	Graduate	N											2003-04			2003-04 workshop client survey
Environmental Studies Certificate Program	Undergraduate	N									2004-05		2004-05			

This grid is designed to assist schools and colleges in the preparation of the annual assessment reports.

Academic programs are listed alphabetically by major, rather than by academic department, even though some units develop assessment plans for departments, because not all academic programs are associated with a single department, and not all departments have a single major.

Using the grid: Please specify with assessment activities have taken place or will take place in each program, and the year when these activities took place, or will take place. For example, if a program evaluated performance in the capstone course as part of the assessment activities this year, indicate "03-04". If the program uses national testing or licensure every year, indicate "annually". If an activity is continuing from a previous year, indicate "03-04"; an example of this might be a survey that was conducted in one year, analyzed in the next, and for which the results continue to inform discussions about curricular changes over successive years. If an activity is conducted periodically, indicate the last year.