**Wisconsin Institute for Science Education and Community Engagement**

**Proposal to Transition the Institute for Biology Education (IBE) to the Wisconsin Institute for Science Education and Community Engagement (WISCIENCE)**

Submitted by Janet Branchaw, Interim Director, to the University Academic Planning Council

**EXECUTIVE SUMMARY**

In alignment with the recommendations of a recent review of the Institute for Biology Education (IBE), this proposal outlines a plan to broaden the mission of the IBE beyond the biological sciences to the natural sciences and to increase the Institute’s commitment and existing efforts to broaden access for all students to science degrees and careers. Thus, we propose that the Institute be renamed the Wisconsin Institute for Science Education and Community Engagement, WISCIENCE.

The WISCIENCE will focus on bringing together science faculty/staff, administrators and students in schools, colleges and departments across campus to collaborate and strategically leverage efforts to support science students and their families and to provide professional development in teaching and learning for science educators across the K-20 spectrum. Two WISCIENCE teams, a Higher Education team and an Outreach & Community Engagement team, will contribute to coordinating services across this broad range of constituents. These teams will also shepherd the transition and take responsibility for existing IBE programs and courses. Importantly, these teams will not assume responsibility for existing science programs in other schools, colleges and departments. Rather, they will facilitate cross-campus connections and build bridges between campus science programs and between the programs and the broader community. In support of UW-Madison’s and the nation’s commitment to broadening access to science degrees and diversifying the science workforce, all WISCIENCE initiatives will include elements that support inclusion of underrepresented groups of students.

**SUMMARY OF PROPOSED CHANGES**

1. Broaden the mission of the Institute for Biology Education to include the natural sciences.
2. Change the name of the Institute for Biology Education (IBE) to the Wisconsin Institute for Science Education and Community Engagement (WISCIENCE).
3. Strengthen the Institute’s focus on broadening access to and success in science majors and careers, especially for students from traditionally underrepresented groups.
INTRODUCTION

The Institute for Biology Education (originally the Institute for Cross-College Biology Education, ICBE) was established in 2004 to enhance biology education through the integration and collaboration of programs and activities across campus. It was formed as an umbrella for the Center for Biology Education (CBE), the cross-campus introductory biology courses and the undergraduate bioscience majors without departmental homes.

In 2003, the committee\(^1\) charged with developing an organizational structure and budget for the ICBE recommended that a committee review the Institute in its fifth year. This review was completed in 2013, after delays resulting from multiple changes in leadership, the 10-year review of the Biology major and the formation of the 2011-12 MIU Introductory Biology working group. In summary, the review (Appendix 3) recommended that 1) responsibility for the introductory biology courses and the undergraduate bioscience majors be transferred to faculty-governed academic departments, 2) responsibility for general bioscience advising be transferred to the Office for Undergraduate Advising, and 3) the Institute be re-positioned to become UW-Madison’s “flagship umbrella organization” for a life sciences education institute shaped by a “progressive expansion of its sphere of influence beyond biology to all the natural sciences disciplines.” It was recommended that the focus of the institute build on current strengths in outreach, student engagement and educator professional development, and that it become the home for the Office for Science Outreach and Engagement, which was proposed by a cross-campus task force in fall 2012 (Appendix 7).

In summer 2013, responsibility for the introductory biology courses and the undergraduate bioscience majors (Biology, Molecular Biology and Biological Aspects of Conservation majors) were successfully transferred to the Colleges of Agricultural and Life Sciences (CALS) and Letters and Sciences (L&S) per the IBE review committee’s recommendations. Likewise, the general pre-bioscience advising position was transferred to the Office for Undergraduate Advising. This proposal outlines a plan to transition the IBE to an institute focused on higher education and outreach & community engagement across science disciplines, the Wisconsin Institute for Science Education and Community Engagement. The functions of the transformed institute will be two-fold: 1) facilitating connections among science outreach and education programs across campus, and 2) ongoing coordination of existing IBE outreach and education programs.

Wisconsin Institute for Science Education and Community Engagement

Vision: The Wisconsin Institute for Science Education and Community Engagement will be a national leader in advancing education, outreach & community engagement in science disciplines.

Mission: The Wisconsin Institute for Science Education and Community Engagement will provide educators and learners at UW-Madison, in the state of Wisconsin and across the nation with opportunities to engage, discover, innovate, and advance the teaching and learning of science for all.

Four operating principles will guide the work of WISCIENCE staff members. We will:

1. Inspire Innovation by supporting educators to develop evidence-based, culturally inclusive teaching and learning practices and bringing stakeholders together to create sustainable, scalable and collaborative solutions to challenges facing science education.

2. Broaden Participation in Science for all learners through activities and partnerships that advance diversity initiatives in education and create a seamless network of support for science students from underrepresented groups throughout the learning continuum from K-12 to undergraduate and graduate education.

3. Expand the Impact of UW-Madison’s Science Expertise by cultivating outreach and community collaborations that bring university and community members together to build partnerships and resources that benefit educators and learners beyond campus.

4. Promote Scholarly Exchange and Leadership through the sharing of successful innovations and participation in national dialogues about teaching, learning and community engagement, positioning UW-Madison to be a leader in science education.

STRUCTURE

The WISCIENCE mission will be broad, connecting schools and colleges and reaching beyond campus. Therefore, we propose that the Provost’s Office continue to be the administrative home for the WISCIENCE, that the Director continue to report to the Provost and Vice Provost for Teaching and Learning, and that a faculty Executive Committee representing science units across the university provide oversight and recommendations regarding WISCIENCE to the Provost (figure 1). Since the Provost’s Office does not have grants management infrastructure, we propose that a memorandum of understanding between the Provost’s Office and one of the schools or colleges be negotiated to provide
this support for WISCIENCE. The College of Agricultural and Life Sciences currently provides grants management support for the Institute for Biology Education.

FUNCTIONS

The WISCIENCE staff members will collaborate with faculty/staff, administrators and students across UW-Madison schools, colleges and departments to achieve its broad mission (see letters of support). WISCIENCE initiatives in Higher Education will align with the Wisconsin Experience and directly support the success of undergraduate and graduate students in science disciplines. Higher education activities will also include professional development in teaching and learning for faculty, staff, graduate students and post-doctoral scholars (e.g. The Wisconsin Program for Scientific Teaching). Likewise, WISCIENCE initiatives in Outreach & Community Engagement will align with the Wisconsin Idea and provide direct support for K-12 students and their families, and professional development in teaching.
Wisconsin Institute for Science Education and Community Engagement

and learning for K-12 teachers. Accordingly, the Outreach & Community Engagement team will foster science outreach connections within and beyond campus.

The Higher Education and Outreach & Community Engagement teams’ activities will overlap and connect in ways that support students’ transition to college at UW-Madison, especially students from traditionally underrepresented groups. Activities will directly support student learning and retention at all levels through partnerships with the faculty/staff, administrators and students in UW-Madison schools, colleges and education programs (e.g., PEOPLE, POSSE, CAE, CEO, WiscAMP, SCIENCE Learning Centers and Wisconsin Leads), with key stakeholders in the state of Wisconsin (e.g., the UW-System, the Department of Public Instruction, Madison and Milwaukee School Districts, Community Centers and Afterschool Inc.) and with leaders in science education reform across the nation (e.g., AAC&U, HHMI, the NSF and NIH). WISCIENCE activities will also indirectly support science student success through K-20 educator professional development programs that improve the effectiveness and increase the cultural inclusivity of science teaching practices.

Specific WISCIENCE activities and the responsibilities of the staff and executive committee members are presented below. It is expected that these activities and responsibilities will evolve over time to serve emerging campus needs. Overall, the WISCIENCE Director will lead the initiatives that advance the Institute’s mission and the Associate Director will oversee daily operations.

**Leadership Team**

**Director**
- Lead development of the Institute’s mission and budget and the synthesis of its functions across Higher Education and Outreach & Community Engagement
- Guide the alignment and integration of the Institute’s work with cross-campus, state and national educational initiatives, as well as Institute contributions to those initiatives
- Lead efforts to develop and secure funding for the WISCIENCE, including federal and private grants, Foundation funding and potential revenue-generating activities
- Maintain a program in the scholarship of teaching and learning that yields nationally recognized contributions to science education

**Executive Committee**
- Provide periodic performance reviews of the Director and of the Institute’s goals, activities and outcomes from which to make recommendations to the Provost
- Provide faculty oversight of courses offered through the Institute’s subject listing
- Advocate for the Institute across and beyond campus
- Members of the WISCIENCE executive committee will be tenured faculty members representing a breadth of UW-Madison schools and colleges
Wisconsin Institute for Science Education and Community Engagement

Advisory Council
- Provide consultation and advice to the WISCIENCE Leadership Team regarding existing and potential future educational initiatives and programs
- Council members will be from the university and the broader community. University members will include faculty, staff, students and academic associate deans of appropriate units (to ensure close coordination with schools/colleges/units). Council members will primarily affiliate with either the Higher Education or the Outreach & Community Engagement Team
- The Council will meet once per year as a large group and at least twice per year in affiliated groups with the Director, Associate Director and appropriate team members

Associate Director
- Support the Director in working with campus partners, the Executive Committee, the Advisory Board and the WISCIENCE staff to execute the institute’s mission
- Provide leadership, supervision and mentoring for the WISCIENCE professional staff members
- Lead and manage administrative operations of the Institute, including budget, grants administration, human resources, technology & information systems and communication
- Support the Director and senior staff in securing extramural funding

Higher Education Team

BioHouse Faculty Director
- Direct the BioHouse residential learning community ([http://www.housing.wisc.edu/biohouse](http://www.housing.wisc.edu/biohouse))
- Link BioHouse initiatives with and support development of the WISCIENCE

BioCommons/BioHouse Coordinator
- Coordinate programming and recruitment at BioHouse residential learning community
- Coordinate events at the BioCommons, including scheduling and other support for operations
- Identify and foster linkages between BioHouse and BioCommons programming activities

Science URM Program Manager, Y1-Y2 Transitions
- Develop and manage the Institute’s student support programs that broaden participation in science disciplines at the undergraduate level
- Work collaboratively with the K-12 to College Prep Science URM Program Manager (see below) to link support URM students who matriculate from pre-college to undergraduate programs
- Coordinate and collaborate across all undergraduate and graduate programs on campus that serve underrepresented populations in science
- In partnership with Steenbock Library, direct and manage the BioCommons services and resources for first and second year, URM, first-generation and transfer students.

Research Mentor/Mentee Training Program Manager
- Lead instruction and training of new instructors of research mentor training ([Entering Mentoring](http://biology.wisc.edu/EnteringResearch.htm)) and mentee training ([Entering Research](http://biology.wisc.edu/EnteringResearch.htm)) across the science disciplines at UW-Madison, including academic year and summer offerings (SROP, [http://grad.wisc.edu/diversity/srop](http://grad.wisc.edu/diversity/srop))
- Oversee collection of evaluation data regarding research mentoring at UW-Madison and link ongoing development and implementation of research mentor and mentee training at UW-
Wisconsin Institute for Science Education and Community Engagement

• Coordinate the Integrated Biological Sciences Summer Research Program (IBS-SRP, http://www.biology.wisc.edu/ibssrp) for undergraduates

Pre-Faculty Professional Development Program Manager
• Manage and coordinate the Wisconsin Program for Scientific Teaching (WPST) for postdoctoral scholars and graduate students (http://www.biology.wisc.edu/1282.htm)
• Cultivate partnerships with other pre-faculty professional development programs across campus (e.g. Delta, Teaching Academy)

Faculty Professional Development Program Manager
• Manage and coordinate ongoing WISCIENCE professional development programming for faculty and instructional academic staff
• Provide individual consulting and build partnerships with other faculty development programs across campus (e.g. MTLE, Teaching Academy, DoIT Academic Technology) to develop new campus resources to support instructors to improve learning outcomes for all students

Outreach & Community Engagement Team

K-12 Educator Professional Development Program Manager
• Develop and deliver professional development programs in science for K-12 teachers in partnership with the School of Education and other campus and off-campus units
• Monitor and share trends with partners in K-12 science education and outreach (e.g. Next Generation Science Standards, http://www.nextgenscience.org)

Science URM Program Manager, K-12 to College Prep
• Manage the Institute’s science pre-college outreach programs that serve minority populations, including the science component of PEOPLE (http://www.peopleprogram.wisc.edu/index.html) and the Summer Science Institute (http://biology.wisc.edu/PreCollege-HighSchool-SummerScienceInstitute.htm)
• Work collaboratively with the Community Liaison to recruit targeted students from across Wisconsin for pre-college programs and from locations across the U.S. for the POSSE program
• Work collaboratively with the Science URM Y1-Y2 Transitions Program Manager to link support for students who matriculate from pre-college to undergraduate science programs

Community Outreach Liaison
• Match community partners with campus scientists and science outreach and education programs
• Coordinate the Science Alliance to facilitate connections and collaborations across science outreach programs
• Manage the Adult Role Models in Science (ARMS) program, including securing programming sites and connecting UW-Madison outreach & engagement programs to those sites

Science Service/Outreach Program Manager
• Teach the Exploring Service course (http://www.biology.wisc.edu/1501.htm) for first and second year students (in collaboration with the Science URM Y1-Y2 Transitions Program Manager)
• Teach the Engage Children in Science course (http://biology.wisc.edu/EngageChildren.htm)

Science URM Cross-Program Coordinator
• Manage logistics for K-12, College Preparatory and Y1-Y2 Science URM programs
• Work with the Science URM Program Managers to coordinate connections across their programs to create a continuous web of support in preparing for and transitioning to college for URM students

Operations Team

Communications Manager/Grants
• Coordinate and manage the development and production of communication materials and branding for all Institute programs and initiatives, including graphic design, writing, editing, layout, presentation design; edit publications, including website; communications planning
• Produce annual reports; develop and produce fund development documents and presentations; assist with grant proposal development and grants research

Technology & Information Systems Manager
• Provide technical support for all Institute projects and activities
• Monitor and maintain the Institute’s computer hardware and software portfolio, including oversight and implementation of data security systems

Financial Specialist
• Perform general accounting activities in support of overall unit budgeting as well as sponsored projects administration
• Provide general financial processing services for the unit, including purchasing and reimbursement

Student Workers/Peer Leaders
• Provide general clerical assistance, financial processing assistance, and assistance with program logistics and activities
• Serve as trained peer leaders in Institute programs

Outreach Administrative Assistant
• Provide administrative assistance for outreach programs
• Coordinate searches and on-boarding, process hires and job changes, process and monitor payroll and employee benefits

Faculty/Staff Fellows (not shown on the organizational chart)
• Lead school, college and department based science education projects and courses in collaboration with Institute staff members
• Faculty participate in sabbaticals that provide professional development and support for development of school, college and department based science education projects and courses

Note: Additional extramurally funded staff members, postdoctoral scholars and graduate project assistants will join the Institute for limited periods of time to work on specific projects.
PARTNERS & COLLABORATORS

The Institute for Biology Education has many existing programmatic partners and collaborators both on and beyond campus (table 1). We propose to transition these partnerships to WISCIENCE and to continue to pursue new partnerships and collaborations that will maximize the efficiency, synergy and impact of campus science outreach and educational initiatives.

Table 1 – Sample of Partners and Collaborators

<table>
<thead>
<tr>
<th>Higher Education</th>
<th>Outreach &amp; Community Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW-Madison Science Schools/Colleges &amp; Departments</td>
<td>UW-Madison Science Schools/Colleges &amp; Departments</td>
</tr>
<tr>
<td>Office of Undergraduate Advising</td>
<td>Morgridge Center for Public Service</td>
</tr>
<tr>
<td>University Housing Residential Learning Communities</td>
<td>Discovery Outreach (WID/MIR)</td>
</tr>
<tr>
<td>Center for Educational Opportunity (CEO)</td>
<td>Science Alliance</td>
</tr>
<tr>
<td>Center for Academic Excellence (CAE)</td>
<td>School of Education Pre-College Programs</td>
</tr>
<tr>
<td>CALS Diversity Affairs Office, MANRRS</td>
<td>PEOPLE</td>
</tr>
<tr>
<td>Undergraduate SCIENCE Learning Centers</td>
<td>Wisconsin Leads</td>
</tr>
<tr>
<td>STEM POSSE</td>
<td>Wisconsin Department of Public Instruction</td>
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<tr>
<td>Chancellors &amp; Powers Knapp Scholarship Programs</td>
<td>Madison Metropolitan School District</td>
</tr>
<tr>
<td>Graduate School Professional Development Office</td>
<td>Milwaukee School District</td>
</tr>
<tr>
<td>National Research Mentoring Network (pending NIH proposal)</td>
<td>Nonprofit Organizations (community centers, museums)</td>
</tr>
<tr>
<td>Sci-Med Graduate Research Scholars Program</td>
<td>Wisconsin Energy Institute</td>
</tr>
<tr>
<td>Delta Program in Research, Teaching and Learning</td>
<td>Materials Research Science and Engineering Center</td>
</tr>
<tr>
<td>Teaching Academy</td>
<td>Nanoscale Science and Engineering Center</td>
</tr>
<tr>
<td>Madison Teaching and Learning Excellence (MTLE) Prgm</td>
<td>Camp Badger</td>
</tr>
<tr>
<td>DoIT Academic Technology</td>
<td>Local Businesses</td>
</tr>
</tbody>
</table>

TIMELINE

We will launch WISCIENCE as soon as possible after final approval by the Provost. A timeline outlining the major events leading to and supporting the establishment of the Institute are outlined in table 2. To monitor and guide development of WISCIENCE, annual reports summarizing the Institute’s activities, impact and challenges from the previous year, and goals for the coming year will be submitted for review and approval through the Executive Committee to the Provost on May 1. We propose a formal review be done in year 5 and then regular reviews thereafter.

Table 2 – Timeline for transition from IBE to WISCIENCE

<table>
<thead>
<tr>
<th>Event</th>
<th>Spring 2014</th>
<th>Summer 2014</th>
<th>Fall 2014</th>
<th>Spring 2014</th>
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<tr>
<td>WISCIENCE proposal consideration by UAPC</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WISCIENCE proposal approval by Provost</td>
<td></td>
<td>X</td>
<td></td>
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</tbody>
</table>
Hire/Appoint Faculty Director | X |
Hire Associate Director | X |
Transition current IBE positions to WISCIENCE positions | X |
Create and hire NEW staff positions | X | X |
Campaign to introduce WISCIENCE to the campus, state and nation | X | X | X |

BUDGET

The broad mission of WISCIENCE will require some resources beyond those currently dedicated to the IBE, including additional staff members, supplies and expenses (S&E), and capital (Table 3). We propose a 3-year plan to transition the current IBE base budget and staff positions to WISCIENCE beginning FY15. New 101 base budget additions are requested over three years totaling $392,657 by FY17. Though the extramural funding for WISCIENCE is yet to be determined, the IBE’s existing extramural resources will transition to WISCIENCE and conservative estimates of WISCIENCE’s extramural funding levels are provided.

Table 3 – WISCIENCE and FY14 IBE Budget Summaries

<table>
<thead>
<tr>
<th>IBE (FY14)</th>
<th>101</th>
<th>New 101</th>
<th>MIU</th>
<th>Extramural</th>
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<th>FTE</th>
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<td>S&amp;E</td>
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<td>$-</td>
<td>$669,125.00</td>
<td>$770,566.00</td>
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<tr>
<td>Capital</td>
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<td>$-</td>
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<td>TOTAL</td>
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<th>Extramural Estimate</th>
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<td>TOTAL</td>
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Wisconsin Institute for Science Education and Community Engagement

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<th>Capital</th>
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<td>750,000</td>
<td><strong>1,933,373</strong></td>
<td>15.00</td>
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**New 101** 392,657

* WISCIENCE staff position descriptions and an organizational chart are presented in the section on “Functions.” Salaries are based on comparable positions at UW-Madison. The positions listed as new to WISCIENCE will be phased in over time or use extramural funding if required by budgetary constraints.

** The proposed WISCIENCE supplies and expenses (S&E) and capital budget projections reflect the broadened mission of the new Institute and are based on current spending in these areas at the IBE.
1. Letters of Support
   a. IntroSTEM Innovators
   b. Morgridge Center for Public Service
   c. Discovery Outreach
   d. Morgridge Institute for Research
   e. UW-Madison Chemistry & Physics Learning Centers
   f. Wisconsin Alliance for Minority Participation (WiscAMP)
   g. Creating Opportunities in Math Engineering Technology and Science (COMETS)
      Program Executive Committee

**NOTE:** The proposed new name of the Institute changed from WISEO to WISCIENCE after the letters of support were submitted.

2. Provost’s Charge to the Institute for Biology Education Review Committee (12-18-2013)

3. Institute for Biology Education Review Committee Report (4-12-2013)

4. Institute for Biology Education Response to Review Committee Report (4-19-2013)


6. Institute for Biology Education Response to BioDeans (6-30-2013)
Appendix 1 – Letters of Support
IntroSCIENCE Innovators

31 May, 2014

Dr. Janet Branchaw
Interim Director
Institute for Biology Education
Room 109a
445 Henry Mall
Madison, WI 53706

Dear Janet;

I support the proposal to transition the Institute for Biology Education (IBE) to become the Wisconsin Institute for STEM Education and Outreach (WISEO) and be officially sanctioned by the university to improve teaching and learning across the STEM disciplines. As you know, I am one of the faculty in the Physics Department who has benefitted enormously from connections with IBE and its innovative programs. These ties have allowed us to gradually improve our large undergraduate courses, which, like most science courses on campus, are taken predominantly by students in the life sciences.

I recall the beginning of IBE’s efforts to reach out across the STEM disciplines in 2000 when it formed SyMBiosis in collaboration with the L&S Dean’s Office (Herb Wang). That program has continued on through today in a variety of forms, including initiatives such as BIGS (chemistry, math, biology) for first year students. The SyMBiosis initiative helped physics begin a dialogue with biologists across campus. With their help we were able to introduce biological examples into some of our lectures, labs and homework problems. Most recently, the IBE was instrumental in starting the IntroSTEM Innovators group, which I co-lead with IBE’s Lillian Tong. A small team of faculty who teach large introductory STEM courses (biology, chemistry, math, physics, statistics) meets informally to share best teaching practices and experiences. We recently submitted a proposal together to the NSF’s WIDER program to help departments introduce interactive teaching methods in these courses. I don’t think any of these programs would have gotten anywhere without IBE’s leadership.

These collaborations with other disciplines outside of biology have been helpful and not in conflict with what happens within departments. The ultimate responsibility for implanting any of the ideas has always been up to the individual departments. Officially broadening the responsibility of the IBE to facilitate cross-STEM communication, collaboration, and promote initiatives that help Teaching and Learning across all the STEM disciplines is a great idea and I fully support it.

Sincerely,

Peter Timbie
Professor of Physics
Co-Lead of IntroSTEM Innovators

Department of Physics
Astrophysics Group
University of Wisconsin-Madison
1150 University Ave Madison, Wisconsin 53706
608/890-2002  Fax: 608/263-0361  E-mail: pttimbie@wisc.edu.cmb.physics.wisc.edu
Appendix 1 – Letters of Support

Morgridge Center for Public Service

June 6, 2014

Janet Branchaw, PhD
Interim Director, Institute for Biology Education
CAMPUS

Dear Janet,

The Morgridge Center for Public Service and the Institute for Biology Education (IBE) have collaborated for many years to create and offer service learning opportunities for students in the sciences. As Director of the Morgridge Center, I fully support the plan outlined in your proposal to transition IBE to the Wisconsin Institute for STEM Education and Outreach (WISEO) and anticipate that the proposed changes will create even more opportunities for our groups to work together in support of the Wisconsin Idea.

Specifically, I strongly support the proposed formalized role of WISEO as a facilitator and connector of STEM outreach across campus (the “Office for STEM Outreach and Community Engagement”). The IBE’s strong history of partnering across boundaries, both on and beyond campus, has built a web of relationships that already supports and connects a broad array of UW–Madison outreach efforts. The IBE’s ongoing informal support of the Science Alliance, an association of science outreach practitioners across campus, sets the stage for WISEO to officially coordinate this group. This coordination will create opportunities for us to integrate outreach and service learning programs in ways that will benefit community members, students and faculty/staff through public service and community based research.

The Morgridge Center’s programs already benefit significantly from the Institute staff members’ expertise in preparing students and faculty/staff to work effectively with the general public and K-12 community. Most notably, expansion of the Institute’s work through the Adult Role Models in Science (ARMS) program, which prepares students through the Engage Children in Science service learning course to co-lead science and computer science clubs with after-school program staff in over 40 locations across the Madison area, will significantly expand service learning opportunities on campus, thus complementing and contributing to the Morgridge Center’s mission.

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Most importantly, the Institute’s refocused emphasis on broadening access to STEM degrees for students from all backgrounds aligns well with the Morgridge Center’s goal of preparing students to work in a culturally diverse world. Together we can explore ways to recruit, engage and retain students from culturally diverse backgrounds through community outreach and service activities that connect them to UW-Madison and the surrounding community in significant and lasting ways.

In summary, I strongly support your proposal to transition the Institute for Biology Education to the Wisconsin Institute for STEM Education and Community Engagement. This unique mission positions the Institute as a key partner with the Morgridge Center and a visible “front door” to the university for STEM-related community partners. The Morgridge Center staff and I look forward to continuing and expanding our collaborations.

Sincerely,

Nancy E. Mathews, Director
Professor of Environmental Studies
Nelson Institute for Environmental Studies
Appendix 1 – Letters of Support
Discovery Outreach

Janet Branchaw, Ph.D.
Interim Director, Institute for Biology Education
University of Wisconsin-Madison
445 Henry Mall, Room 109A
Madison, WI 53706

June 3, 2014

Dear Dr. Branchaw,

I am delighted to offer this letter of support regarding your proposal for a new Wisconsin Institute for STEM Education and Outreach (WISEO). As you know, we at Discovery Outreach have worked closely with many staff members from the Institute for Biology Education and view our efforts as highly synergistic with, and supportive of, many of your goals. Similarly, it is clear that many elements of your proposal have the potential to add tremendous value and impact to our programs and activities based at the Town Center of the Wisconsin Institutes for Discovery.

In particular, we are very excited about the potential of the WISEO to connect both internal (i.e. university) and external (i.e. community) partners to STEM outreach opportunities based at the Wisconsin Institutes for Discovery. While we currently partner with several student groups, university program initiatives and faculty connections in delivering STEM programs that reach more than 30,000 community members, K-12 students and educators each year, there are clearly many more substantive ways to leverage programs at Discovery to engage faculty, staff and students for our mutual benefit. WISEO seems like the ideal vehicle to make this potential a reality. Similarly, by serving as the “STEM front door” for the campus, WISEO can help connect appropriate audiences to Discovery Outreach programs and be an important partner in identifying new audiences or new program directions that might complement other campus activities.

We look forward to working with you and your staff as this initiative moves forward and envision a highly integrated approach to connecting WISEO and Discovery Outreach, including inviting a member of your leadership team to serve on the Town Center Advisory Board and other regular staff interactions.

We are at your disposal as you bring WISEO to campus and welcome the opportunity to support this compelling proposal.

Sincerely,

[Signature]

Laura Heisler, Ph.D.
Director of Programming, Wisconsin Alumni Research Foundation and
Director of Outreach, Morgridge Institute for Research
Appendix 1 – Letters of Support
Morgridge Institute for Research

June 3, 2014

Janet Branchaw, Ph.D.
Interim Director, Institute for Biology Education
University of Wisconsin – Madison
445 Henry Mall, Room 109A
Madison, WI 53706

Dear Dr. Branchaw,

On behalf of the Morgridge Institute for Research (MIR), I am delighted to express support for the proposal to establish the Wisconsin Institute for STEM Education and Outreach (WISEO). From the standpoint of MIR’s mission to conduct and enable innovative interdisciplinary biomedical research, we are excited to see the WISEO focus on strengthening education and training in the STEM disciplines – disciplines at the foundation of biomedical research.

As an interdisciplinary research center and collaborative hub, MIR shares and supports the interest of UW-Madison for perpetuating a strong biomedical research program and vibrant and effective training of the biomedical research workforce. MIR funds an education liaison to provide assistance to faculty developing interdisciplinary graduate and postdoctoral training programs and it is in these efforts that we see a potentially strong collaboration with the WISEO programs. The activities that the WISEO will develop and undertake in support of professional development and training will provide great models across campus and have the potential to fuel further collaborations and new initiatives, with which MIR will be pleased to be a partner.

We strongly support the plan to create the WISEO as the campus hub for STEM education and outreach efforts, and we look forward to collaborative opportunities furthering the training of graduate students, postdoctoral trainees, and faculty in the service of biomedical research and progress in improving human health.

Sincerely,

Brad Schwartz, MD
Chief Executive Officer
Morgridge Institute for Research
Professor of Medicine and Biomolecular Chemistry
University of Wisconsin
Appendix 1 – Letters of Support
UW-Madison Chemistry and Physics Learning Centers

April 17, 2014

Janet Branchaw, Interim Director
Institute for Biology Education
University of Wisconsin-Madison

Dear Janet:

It is our pleasure to enthusiastically support your proposal for the Wisconsin Institute for STEM Education and Outreach. The proposed Science Institute is an exciting initiative with the potential to address unmet student needs and complements the work of the Learning Centers such as the Physics Learning Center and the Chemistry Learning Center. We outline below a few ways that we see WISEO contributing to these efforts.

- **WISEO could serve as a central location to help students to identify and connect to campus resources** such as the Learning Centers and undergraduate research opportunities.
- **WISEO could plan and coordinate programming to help students in STEM disciplines.** This could be an ongoing series and opportunity for students with STEM interests to connect with each other, and could follow the Fall Wisconsin Alliance for Minority participation in STEM retreat. Topics could include balancing work, community involvement and academics; connecting to research opportunities; planning for graduate studies; career planning etc.
- **WISEO could collaborate with the Learning Centers for on campus and extramural funding opportunities.**
- **WISEO could research policy questions** that arise such as credit policy for students engaged in Peer Mentoring.
- **WISEO could collaborate** with others organizations such as the Madison Metropolitan School System, the PEOPLE program, and grassroots community coalitions addressing equity gaps to **organize campus visits for pre-college students and their families** to let them know about opportunities such as undergraduate research and the Learning Center communities. These collaborations could help Madison students from underrepresented groups feel welcome on the UW campus and see studying a STEM field as a potential option for their future.
- **WISEO could serve as a clearing house** for information regarding students, postdoctoral fellows, faculty and staff interested in mentoring precollege students and visiting school classrooms.


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6/11/14 - REVISED
In addition, we have a few suggestions as follows for the development of the Wisconsin Institute for STEM Education and Outreach.

- We strongly recommend keeping the Learning Centers based in their respective Departments within the College of Letters and Sciences and not migrating them to WISEO. There are many synergistic reasons to house our Learning Centers in proximity to the courses we serve, including fostering connection and support of the faculty; facilitating connections with course teaching staff; and enabling students to have a learning community space in which to study between classes.

- We recommend that WISEO also focus on returning adult students, transfer students, McBurney students, first generation college students, and students from lower income circumstances, as well as students from historically underrepresented racial/ethnic groups, as students from all of these groups can experience campus isolation, challenges finding study partners, and difficulty navigating university resources.

In sum, we think that WISEO could play an important role in complementing our work, especially in connecting students to resources such as the Learning Centers. We strongly support your proposal for the Wisconsin Institute for STEM Education and Outreach and would look forward to collaborating with you though this new Institute.

Sincerely,

Dr. Susan Nossal
Director, Physics Learning Center/Associate Scientist
University of Wisconsin-Madison
nossal@physics.wisc.edu; 608-262-9107

Dr. Anthony Jacob
Director, Chemistry Learning Center
University of Wisconsin-Madison
atjacob@wisc.edu; 608-265-5497
Appendix 1 – Letters of Support
Wisconsin Alliance For Minority Participation

May 1, 2014

Janet Branchaw, Interim Director
Institute for Biology Education
445 Henry Mall, Room 109a
Madison, WI 53706

Dear Dr. Branchaw,

The Wisconsin Alliance for Minority Participation (WiscAMP) is pleased to support the proposed Wisconsin Institute for STEM (science, technology, engineering and mathematics) Education and Outreach (WISEO). The proposed institute will provide an important mechanism for broadening participation and supporting student success in STEM at UW-Madison. As the executive director for WiscAMP, I can attest to the struggle many undergraduates face in identifying a clear path to success in their STEM majors. The many departments and centers for STEM education and research at UW-Madison reflect the high caliber of expertise and specialization of our faculty and graduate students. However, the organizational complexity is very difficult to navigate, particularly for underrepresented minority (URM, specifically African American, Native American, Latino/a, and Native Hawaiian) and first generation students. Even for students who are able to connect with their major departments, the relatively low enrollments of underrepresented minorities in undergraduate classes in STEM can contribute to students’ sense of isolation.

WISEO will provide a central location for students to receive consistent, accurate information about the opportunities and resources available to support their success in their STEM majors. As a campus-wide center it will be able to support inclusive learning communities for all STEM majors.

WiscAMP was established in 2004 through the National Science Foundation Louis Stokes Alliance for Minority Participation (LSAMP) Program. As an alliance of 17 public and private 4-year institutions, 3 community colleges and 1 tribal college, WiscAMP has successfully led a statewide effort to double the number of underrepresented minority students who completed their bachelor degrees in STEM from 169 in 2008 to 341 in 2013. In the next five years, we anticipate re-doubling the number URM students who complete their bachelor degrees in STEM and increase the numbers who enter graduate research programs in STEM.

WiscAMP looks forward to working with WISEO on increasing the number and diversity of students pursuing STEM degrees while supporting success for all STEM majors.

Sincerely,

Gail Coover, PhD.
Executive Director for the Wisconsin Louis Stokes Alliance for Minority Participation (WiscAMP)
Wisconsin Institute for Science Education and Community Engagement

Appendix 1 – Letters of Support
Creating Opportunities for Math Engineering Technology and Science (COMETS)

199 Kennedy Heights | Madison, WI 53704 | (608) 244-0767

February 10, 2014

Director Center for Biology Education, Janet Branchaw Ph.D.,

We are writing to express gratitude for the past years of support and for the University’s new commitment to creating an Institute for STEM Education. Through ARMS, the Institute for Biology Education has had a direct and visible impact on the community. Both in school and out of school programs in STEM have been enriched as ARMS promotes excellence in biology and science education. The value placed on diversity, innovation, engaged scholarship, and community building have been evident throughout ARMS engagement.

The ARMS program provides resources and support through its partnership in the Creating Opportunity in Math, Engineering, Technology and Science, (COMETS) program. COMETS is a multi-center agency partnership made possible through a grant from the Madison Community Foundation. COMETS involves six community centers and supports science education by providing monthly professional development opportunities for after school staff so that they are comfortable and confident leading STEM activities during out of school time programming and ongoing consultation. It also supports Family Science Nights and parent workshops to be provided in the centers throughout the year.

In addition to the staff professional development, COMETS in the persons of Dolly Ledin and Shaheen Sutterwala, trains volunteers from the service-learning course, “Engage Children in Science”. Volunteering is an invaluable learning experience for University students. The course is currently very practical and gives students the skills they need to engage kids in science. It is taught by UW staff who have relationships with the community and understand our needs. With the support from ARMS, the COMETS program collectively provides STEM opportunities to more than 160 children in 2nd – 5th grades, these are primarily low-income children that without the COMETS program and ARMS partnership would not have access to STEM enrichment activities.

With the enhanced staffing in place, each of the six centers are working together to seek additional funding to continue, strengthen and expand COMETS. The Community Centers support STEM learning by contributing funds, staff, space, family and school engagement and some materials and supplies. ARMS continued commitment to this project is essential.

As a group, the Centers are writing to support the formation of a new Institute for STEM Education. We appreciate the University’s commitment to community engagement. We believe that ARMS and COMETS represents the Wisconsin Idea at its best. The strength of this program is in the collaborative nature of the partnership. We look forward to meeting with you as the new Institute is formed to ensure that ARMS continues to meet community needs and build on community strengths. A member of our group will email you to follow up next week.

Sincerely,
Creating Opportunities in Math Engineering Technology and Science (COMETS) Program Executive Team

Tom Solya, Executive Director
Tom Moen, Executive Director
Becky Steinhoff, Executive Director
Bridge Lake Point Wannona and East Madison Community Center Goodman Community Center

Vera Court Neighborhood Center

Alyssa Kenney, Executive Director
Paul Terranova, Executive Director
Kennedy Heights Community Center Lussier Community Education Center

Cc: Chancellor Rebecca Blank, Ph.D., Director of Community Relations, Everett Mitchell, Director of Morgridge Center for Public Service, Nancy Mathews, Ph.D.

We envision a safe and vibrant community where people can connect, learn, grow and thrive.
Appendix 2

Provost’s Charge to the Institute for Biology Education Review Committee

Provost’s Charge to Institute for Biology Education
2012 Self-Study

The Provost’s Office established the Institute for Cross-College Biology Education (ICBE) in 2004 as an umbrella structure to coordinate cross-campus undergraduate biology education and to provide an administrative home for the Center for Biology Education. At that time, the Institute was charged to undergo review after 5 years. To begin this review, the Provost’s Office requests that the Institute prepare a self-study to:

1. Analyze the effectiveness of the Institute in administering the introductory biology courses (Biology 151/3-2 and Biocore) and the three undergraduate majors without departments (Biology, Molecular Biology and Biological Aspects of Conversation). Please coordinate with the recommendations of the 10-year review of the Biology Major and the MIU committee’s review of the introductory biology courses in this analysis.

2. Analyze the effectiveness of the Institute in providing an administrative home for the (former) Center for Biology Education.

3. Describe new initiatives that have emerged from the formation of the Institute. Include how these initiatives have addressed needs or gaps in biology education.

Please provide a set of recommendations regarding each of the items above and a vision for the future work of the Institute, including an administrative infrastructure to best manage the proposed future tasks of the Institute.
1. The Institute for Biology Education (IBE) is in transition from an umbrella organization for bioscience majors, introductory biology courses and the Center for Biology Education to an umbrella organization that the committee recommends enables student engagement in biology education, from KB12 through undergraduate education, integrated within the natural sciences. The committee unanimously endorses IBE’s continued key role in engaging UWB Madison faculty and academic staff in natural science education, utilizing the outstanding research resources of UW-Madison campus for the betterment of student learning.

2. The Director of IBE should be a tenure-track or tenured professor, ideally with nationally recognized contributions to initiatives in natural science education, with an emphasis in biology. An Associate Director, a Financial Specialist and a Specialized Educational Technologist (all non-faculty), together with three team leaders, will be necessary to support IBE’s considerable administrative and organizational workload. Oversight should include an Institute Steering Committee that acts as an internal advisory board.

3. IBE priorities should be:
   a. Professional teaching development and innovations in introductory biology curriculum integrated with on-going national initiatives engaging natural sciences into biology curricula,
   b. BioBCommons and BioHouse, including engagement of campus biology advisors,
   c. Outreach and KB12 programs emphasizing the natural sciences and teaching outreach skills to undergraduate and graduate students.
   d. Expand to include all disciplines in natural science education.

4. The Review Committee’s vision for IBE’s future is a progressive expansion of its sphere of influence beyond biology to education in all the natural science disciplines. We suggest an incremental broadening of the Institute’s overall mission that would transition its efforts toward facilitating enhancement of natural sciences education, eventually evolving into an entity such as the Wisconsin Institute for Education in the Natural Sciences.

5. IBE should no longer serve a major role in undergraduate biology advising, but should maintain a connection with such advising in collaboration with the Office for Undergraduate Advising.
Appendix 4  
Institute for Biology Education Response to Review Committee Report

April 19, 2013  
Provost Paul Deluca & Interim Vice Provost Christopher Olsen  
150 Bascom Hall

CAMPUS MAIL

Dear Provost Deluca and Interim Vice Provost Olsen,

Please accept this letter on behalf of the Institute for Biology Education’s (IBE) leadership team in response to the IBE Review Committee’s Report of 12 April 2013. The time and intellectual energy that the committee members devoted to the review is evident in the report’s comprehensive coverage of the breadth and collaborative nature of the Institute’s work. We truly appreciate the committee members’ efforts and thank them for their thoughtful and insightful recommendations.

Overall, we support the recommendations made by the committee. In this letter, we offer reflections on the five recommendations presented in the Executive Summary and raise additional issues for consideration with regard to the Institute’s future.

Recommendation #1 – We appreciate the committee’s affirmation of the quality and value of the Institute’s work and the suggestion that we continue to cultivate educational initiatives across the natural sciences. The committee acknowledges the Institute’s “key role in engaging UW-Madison faculty and academic staff in natural sciences education.” We would like to highlight the crucial role that endorsement and advocacy from campus leadership plays in garnering this engagement. We suggest that formal encouragement and acknowledgement from the Provost’s and Deans’ Offices for the faculty and academic staff, who are already engaged in and lead educational initiatives through the Institute, would significantly broaden and enhance the impact of the Institute’s work.

Recommendation #2 – We support the recommendation that the Director of the Institute be a tenure-track or tenured professor, with nationally recognized contributions to initiatives in natural sciences education, for all of the reasons stated in the report. In addition, we stress the Institute’s need for a strong administrative infrastructure. Our current administrative staff members are excellent, but challenged to meet the needs of the Institute’s programs, which frequently provide service to other units across campus and partners in the community beyond. In particular, base funding for grants administration is needed to support the Institute’s efforts to secure extramural funding.

Recommendation #3 – The recommended priorities for the Institute coalesce around bioscience students’ transition to college and “introductory biology” through a) professional teaching development and innovation, b) the BioCommons Project and the BioHouse residential learning community, and c) the teaching of Outreach & Community Engagement skills to undergraduate (and graduate) students. Given the committee’s recommendation to expand to the natural sciences, the campus need for support and coordination in first-year biology and the emergence of a separate cross-campus Office for SCIENCE Outreach and Engagement (OSOE), an Institute focused on the transition to college and “introductory biology” makes sense and would be in a position to make significant contributions. Regarding the OSOE, we anticipate developing strong linkages between the Institute and this office, positioning the Institute to share its extensive community connections, partnership building capabilities and successful outreach
In addition to our comments on the review committee’s recommendations, we offer the following BioCommons Project partnership to coordinate academic advising activities at the BioCommons. In either case, we invite the Office for Undergraduate Advising to join the Institute and Steenbock library in the support programming and a new position is created at the Office for Undergraduate Advising. In either position either be shared or that the Institute retains the student services coordinator position to support programming and a new position is created at the Office for Undergraduate Advising. Therefore, we propose that this position should be incremental and are eager to facilitate a gradual, grass-roots approach that engages and incorporates the existing interests and expertise in education across the natural sciences community.

Recommendation #5 – We recognize that the recent establishment of pre-health and pre-biological sciences advising services across campus have reduced the need for the Institute to serve a major role in undergraduate biology advising. However, the general biosciences advisor, a student services coordinator, plays a key role in designing and running our undergraduate educational programs, especially those being developed for the BioCommons. Transfer of this position from the Institute would result in a significant loss of expertise and programming capacity. Therefore, we propose that this position either be shared or that the Institute retains the student services coordinator position to support programming and a new position is created at the Office for Undergraduate Advising. In either case, we invite the Office for Undergraduate Advising to join the Institute and Steenbock library in the BioCommons Project partnership to coordinate academic advising activities at the BioCommons.

In addition to our comments on the review committee’s recommendations, we offer the following points for consideration.

• **The School of Education** – The Institute has long-standing, strong partnerships with the School of Education that we would like to acknowledge. These collaborative relationships have been key to the success of our K-12 outreach programs and more recently our BioScholars Postdoc program. We envision maintaining and expanding these partnerships in the future.

• **The Biology Subject Listing** – The Institute is currently responsible for the Biology Subject Listing through the governance of its faculty Steering Committee. However, because the Institute does not report to a college, this governance structure is not “regular.” As stated in our self-study, we recommend that responsibility for the Subject Listing move to a department in either CALS or L&S. To ensure that existing Institute courses (e.g. Bio 100 - Exploring Biology and Bio 260/261 - Entering Research) continue to be offered and to preserve the ability of the Institute to develop new courses, we propose that a Memorandum of Understanding between the adopting department and the Institute be established. At the request of the Provost’s Office and under the guidance of the Office of Academic Planning and Institutional Research, the Institute is prepared to facilitate a process to identify a new governing departmental home and transfer responsibility for the subject listing.

• **Diversity Initiatives** - The Institute has played a key role in leading and coordinating diversity initiatives across the biological sciences. This commitment cuts across our mission, from K-12 to
undergraduate/graduate education to faculty development. We work collaboratively with diversity programs across and beyond campus to build the pipeline for recruitment, retention and support of students, faculty and staff, who are members of underrepresented groups in the biological sciences. We anticipate that broadening our mission to include the natural sciences will have a significant positive impact on these efforts.

- **Resources** – We agree with the review committee’s observation that the proposed administrative structure in Figure 5 of the Self Study document would “provide a practical basis for transition of the institute to a broader natural science base.” We also concur that the personnel needed in this structure could be derived from the Institute’s current base funding and FTE allocation, if the resources and positions currently allocated to the academic majors remain at the Institute. As discussions with our natural sciences colleagues progress and assuming they lead to a broadening of the Institute’s mission, we anticipate that ongoing analysis of resource needs will be necessary.

Thank you for the opportunity to respond to the review committee’s report.

Sincerely,

Janet Branchaw, PhD
Interim Director, Institute for Biology Education
Wisconsin Institute for Science Education and Community Engagement

Appendix 5

BioDeans Response to Review Committee Report

June 11, 2013

To: Provost Paul DeLuca and Interim Vice Provost Chris Olsen
From: BioDeans
Subject: Response to IBE Review Report

Dear Provost DeLuca and Vice Provost Olsen,

We are pleased to have this opportunity to provide feedback on the report of the Institute for Biology Education's (IBE) review team. For over a decade, IBE has played an important role at UW-Madison in biology education, from outreach to K-12 students and teachers, to developing innovative programs for our own undergraduates, oversight of three biological science majors\(^2\) and introductory biology courses, to professional development of faculty, instructional staff and future faculty. We appreciate the leadership that IBE personnel have brought to these issues, and their service to students and instructors in our community.

When Provost DeLuca met with the BioDeans on May 8\(^{th}\), he indicated that he was looking for our overall sense of the recommendations and that we should keep the budget in mind. Our comments, below, take those instructions into account and are organized in response to the major points of the review’s executive summary. Unless otherwise stated, the viewpoints provided below represent a consensus among the BioDeans.

1. **IBE transition.** We agree with the review committee that IBE should continue to play a key role in engaging the community for the betterment of student learning in the life sciences. Due to the transition of the introductory course series to the oversight of the College of Letters and Sciences (L&S) and the transition of the Biology Major to the oversight of the College of Agriculture and Life Sciences (CALS) and L&S, IBE’s activities will now transition to a more focused portfolio, which we believe is appropriate and strategic.

2. **IBE administrative structure.** We feel less strongly about the administrative structure advocated by the review team. As elsewhere on campus, such a structure is dependent upon the availability of funds and personnel, and as in any such decision, other campus needs should be borne in mind when making decisions about the number of FTEs for the Institute’s administration. The administrative support structure could, for instance, be clustered with that of another unit for effectiveness and efficiency. We are open to the idea of a tenured faculty member serving in the role of director, which would help to coordinate the activities of IBE with those of academic units. Note that we recommend that the individual should be tenured before taking on the administrative duties involved in oversight of the institute. A director who is mid-career or more senior is more likely to have “nationally recognized contributions to initiatives in natural science education” at the time of appointment, and the duties of the Institute may interfere with a junior scholar’s ability to earn tenure.

3. **IBE priorities.** The review committee proposed several types of activities as priorities for IBE (the priorities recommended in the report are in bold italics, below). We assert that a subset of

\(^2\) Biology, Molecular Biology, and Biological Aspects of Conservation
these activities should be priorities, while others should not. A smaller set of priorities will allow the Institute to focus their contributions in several strategically important areas.

- **Professional teaching development and innovations in introductory biology curriculum integrated with on-going national initiatives engaging natural sciences introductory biology curricula.** We strongly agree that IBE should retain leadership for professional teaching development. This is a good example of a function where leadership at the campus level can be most effective, rather than duplicating efforts at the college level. We also support IBE's role as an effective partner or catalyst for innovations in life science curricula. As a general principle, however, we strongly recommend that campus should avoid having academic programs run out of non-academic units. Therefore we recommend that efforts to update UW curricula or develop innovative programs for current students, especially those seeking grants for program development, are best undertaken in partnership with academic units with interest in the programs. This will increase the likelihood that appropriate innovations will be adopted and that no orphan programs will be created, and that these educational activities align with the priorities of academic units. We note, too, that MIU funding was provided to the Department of Zoology for the purpose of enhancing Introductory Biology offerings and recommend ensuring that any activities undertaken by IBE support rather than compete with or duplicate MIU-supported efforts.

- **BioCommons and BioHouse.** One of IBE’s strengths over the years has been as an incubator for new initiatives that may not otherwise arise from a single department or college. In keeping with that strength, IBE has been key to developing the concept of the Biocommons and to planning for BioHouse. The BioDeans support both of these co-curricular projects as beneficial for a broad array of biological science students. We suggest, however, that as these and other IBE-initiated programs are established, their oversight should transition to other entities, thus freeing IBE personnel and resources to incubate new ideas.

  The proposed BioCommons is an attractive mechanism to provide a centralized resource and, importantly, to create community for students and faculty and staff with like interests who are currently distributed among several colleges. The model of Wendt Commons has been instructive in crafting a mission and structure for BioCommons, but it is important to remember that Wendt Commons (like its predecessor, Wendt Library) is a sub-unit of CoE Academic Affairs and thus operated in an administrative structure that fosters close engagement with academic policies and programs. The diffuse nature of the biological sciences mean that a BioCommons cannot be similarly integrated with a single Office of Academic Affairs. Steenbock Library, however, has long operated at the interface of biological sciences, and might be considered as an appropriate administrative as well as physical home for the BioCommons. The mission of the library and the purpose of the commons seem well-aligned in supporting curricular offerings and research programs across several Bio colleges.

- **Outreach and K-12 programs emphasizing the natural sciences and teaching outreach skills to undergraduate and graduate students.** The BioDeans agree that IBE should continue in these efforts.

- **Expand to include all disciplines in natural science education.** We agree that this suggestion should be considered. See number 4 for a fuller discussion.

4. **Expansion of vision from biology education to natural science education.** An integrated unit for natural science outreach, engagement, and teaching development makes sense in several respects. If IBE were to be part of this, their experience could have impact beyond life
Wisconsin Institute for Science Education and Community Engagement

sciences. It makes sense to cluster similar activities rather than duplicate infrastructure. A common front door for natural science outreach and engagement could also create more clarity and visibility for our partners in the community.

While acknowledging that an expansion of vision from biology to natural science education has some appeal, a decision to take that step will require a broader conversation. A discussion is already underway about an office of SCIENCE outreach and engagement, and IBE’s role needs to be considered in that context. Appropriate groups from academic units and outside of academic units need to be included in this conversation.

5. Transfer of advising roles to the Office for Undergraduate Advising. The BioDeans agree both that undergraduates interested in the biological sciences need access to advising and that IBE should no longer serve a major role in undergraduate advising. In 3, above, we recommended avoiding having academic functions run out of non-academic units (indeed, this was a key rationale for relocating the undergraduate majors into the colleges). For this reason, we would also not recommend placing any pre-biology advising function in either IBE or the Office of Undergraduate Advising.

In current campus-wide practice, all undergraduates must be assigned an advisor and must be affiliated with a school or college by the time they complete SOAR. Even CCAS-assigned students are officially placed in a college; namely L&S. (This affiliation is crucial, since all students must be governed by a set of academic policies, and these policies vary by unit – e.g., how many pass/fail courses may be taken and when; which courses count for degree credit; how general education requirements are audited or adapted.) As a result, even formally undeclared students currently have access to support for exploration. Three key units currently serving this function are CCAS, L&S Academic Student Affairs, and CALS Transitional Advising Service. In addition, most undergraduate advisors on campus are skilled at helping hand students off to colleagues when students’ interests change or extend beyond a single program or school. For this reason, we do not see a significant need for a general biosciences advisor that cannot be served by existing units if provided with adequate resources, support, and training. We note that the original “general biosciences advisor” position (which was housed in CALS) came about in the days before CCAS and CALS TAS existed.

There may be a role for a general biosciences coordinator to arrange for biosciences professional development for assigned advisors, but we recommend this position serve advisors (much like the staff in the central Office of Undergraduate Advising) rather than providing direct service to students. We note, too, that the pre-law and pre-health advisors housed in OUA are imperfect models for a biosciences advisor as their purpose is to help students explore and prepare for post-baccalaureate options, which students’ assigned advisors may not be well-prepared to handle.

The BioDeans also note that campus recently invested MIU resources in building or strengthening CCAS, OUA, and TAS, as well as a variety of other advisors on campus. We advocate studying the assessments of these efforts before determining the need for additional allocations.

Would be happy to answer any questions you might have. If desired, we would be happy to have you attend another meeting of the BioDeans to discuss this topic.
Appendix 6
Institute for Biology Education Response to BioDeans

June 30, 2013
To: Provost Paul Deluca & Interim Vice Provost Christopher Olsen
From: Janet Branchaw, Interim Director Institute for Biology Education
Subject: BioDean’s Response to IBE Review

Dear Provost Deluca and Interim Vice Provost Olsen,

Thank you for the opportunity to respond to the BioDeans feedback on the report from the Institute for Biology Education’s review committee. We appreciate the Dean’s acknowledgement of the Institute’s leadership in advancing biology education at UW-Madison and their support of the recommendation that we broaden our scope to the natural sciences. We look forward to working closely with them to identify and encourage appropriate groups in their academic units to contribute to the conversation about this transition and we welcome their support in encouraging faculty, staff and students in their schools and colleges to partner with us on innovative educational initiatives.