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The Engaged Scholar Magazine is published annually by University Outreach and Engagement, Michigan State University. The magazine focuses on collaborative partnerships between MSU and its external constituents—partnerships forged for mutual benefit and learning, with an emphasis on research.

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Foreword: Sustainability

Sustainability is at the heart of engaged scholarship at Michigan State University. It appears in core MSU programs, activities, and documents as an intrinsic value in developing and evaluating the University's outreach efforts.

A key 1993 report on university outreach at MSU1 mentions "the capacity of off-campus audiences to maintain and sustain outreach gains" as part of the "art and science" of successful community engagement. A later guidebook for planning and evaluating outreach initiatives² refers to "the sustainability of endeavors" as being embedded in "developmental processes that evolve, grow, and progress over time." In the Matrix for Evaluating Quality Outreach proposed in that document as a tool for project evaluation—the assessment criteria include such questions as: "What part does the contribution make to capacity building and sustainability?" and "To what extent did the project develop mechanisms for sustainability?"

What Is Sustainability?

A 1987 report of the U.N. Brundtland Commission³ defines the term simply as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Many people automatically think of this as a primarily environmental issue. However, those who are involved with the research, policies, and practices of sustainability are more likely to look for what they call the "triple bottom line" of intertwined economic, environmental, and social systems. Sustainability, they say, "is about the interdependence of living organisms and communities (both human and nonhuman) over the long haul...Each has an impact on and consequences for the others."4

Thus, MSU's 2007 Campus Sustainability Report includes social indicators (e.g., student, faculty, and staff diversity; health; workplace injuries) and economic indicators (e.g., research funding; employee wages and benefits; student debt) as well as environmental indicators (e.g., land and water management; transportation; energy use).

Long-Term Commitment

The investigators featured in this issue of *The Engaged Scholar Magazine* approach sustainability from different directions—from wildlife monitoring to community watershed management, grasslands research, sustainable agriculture, energy education, green chemistry, Fair Trade law, and business development. What they have in common is a dedication to keeping in mind the larger systems we are all a part of and how we are both shaped by them and in turn shape them. They are in it for the long haul.

The next issue of the magazine will have an urban focus.

Linda Chapel Jackson Editor

⁴ University Committee for a Sustainable Campus. (2007, April). Campus sustainability report. Retrieved May 21, 2009, from ecofoot.msu.edu/c.s.report.htm



¹ Provost's Committee on University Outreach. (1993). Extending knowledge to serve society: University outreach at Michigan State University. Retrieved May 21, 2009, from outreach.msu.edu/documents.asp

² Committee on Evaluating Quality Outreach. (1996). *Points of distinction: A guidebook for planning & evaluating quality outreach*. Retrieved May 21, 2009, from **outreach.msu.edu/documents.asp**

³ United Nations World Commission on Environment and Development. (1987, March). *Our common future: Report of the World Commission on Environment and Development*. Retrieved May 21, 2009, from worldinbalance.net/agreements/1987-brundtland.php

Wildlife and Natural Resources

Human institutions ways of organizing activities—affect the resilience of the environment. Locally evolved institutional arrangements governed by stable communities and buffered from outside forces have sustained resources successfully for centuries, although they often fail when rapid change occurs... Promising strategies for addressing [environmental] problems include dialogue among interested parties, officials, and scientists; complex, redundant, and layered institutions; a mix of institutional types; and designs that facilitate experimentation, learning, and change.

Dietz, T., Ostrom, E., & Stern, P. C. (2003). The struggle to govern the commons. *Science*, 302 (5652), 1907-1912.



Dr. Jim Sikarskie and veterinary students Naomi Johnson, Kirsten Begin, Joann Swatek, and Allison Eavey examine the wing of a red-tailed hawk that was brought in for treatment of lead poisoning.

Birds of Prey as Environmental Monitors and Tools for Learning

James G. Sikarskie

Associate Professor
Department of Small Animal Clinical Sciences
College of Veterinary Medicine

Growing up on a farm in the Upper Peninsula, **Jim Sikarskie** was accustomed to seeing birds of prey. His childhood dream was to become an ornithologist. He was struck by the dire statistics presented on the first Earth Day in 1970—that, based

on estimates from shell thickness and pesticide use, many raptors (birds of prey) would be extinct by 2000. This stark data helped shape what would become his personal creed: "We have to accept the challenge of the future," he said.

"We are hardwired to be relaxed by the environment... 'nature deficit disorder' results in a number of behavioral problems. Live outreach with birds begins to address these issues; the animals grab the children's attention, then they listen and they learn something."

James G. Sikarskie



Dr. Sikarskie has spent much of his life meeting this challenge. His involvement in projects at MSU has ranged from giving presentations at schools to recruiting students for degrees in wildlife management, rehabilitating injured wildlife, and judging wildlife art competitions. The funds from one such art program went into building outdoor flight pens for rehabilitating raptors.

One of Sikarskie's best-known projects was the Wildlife Encounters program, which was created in the 1980s as a partnership between Dennis Laidler at Michigan United Conservation Clubs (MUCC) and MSU's College of Veterinary Medicine. The program used live animals that were permanently disabled-and therefore would not be able to survive in the wild—to teach about Michigan's wildlife and ecology. Laidler, now curator of educational programs at Lansing's Potter Park Zoo, credits Sikarskie with making the program happen. "His success, expertise, and reputation," Laidler said, "made the whole operation possible." Sikarskie estimated that approximately 100,000 children a year participated in this program, which lasted almost 20 years.

Sikarskie cited several reasons for the success of the program. "We are hardwired to be relaxed by the environment," he said, noting that "nature deficit disorder" (a term first used by Richard Louv in the book Last Child in the Woods) results in a number of behavioral problems. Live outreach with birds begins to address these issues. The animals grab the children's attention, "then they listen, and they learn something." Although a decline in overall membership, lack of funding, and a change of focus within MUCC resulted in the ending of the Wildlife Encounters program in January 2009, local organizations are continuing the work. At Potter Park Zoo, for example, Laidler said, "Because of Dr. Sikarskie's help in getting MUCC animals over here, we'll be able to add two presentations to our educational menu on Michigan wildlife diversity and Michigan birds of prey." Sikarskie himself plans to stay involved with MUCC as it begins a new program called "No Child Left Indoors."



Students Allison Eavey, Naomi Johnson, Trevor Moore, and Joann Swatek prepare to release a young eagle into an outdoor flight pen.

Sikarskie's other major project, "Systematic Environmental Assessment: Eagles Assess Global & Local Ecosystems" (SEA EAGLE), while much more recent than Wildlife Encounters, also stems from the wake-up call of Earth Day 1970. Sikarskie and Bill Bowerman, a former Ph.D. student who now teaches at Clemson University, are conducting research on the eight species of Haliaeetus (sea eagles), which include the bald eagle. Because sea eagles are at the top of the aquatic food chain, they make excellent biomonitors of contaminants such as mercury. By "drawing blood and pulling feathers," Sikarskie and Bowerman are able to measure the degree of contamination of the Great Lakes region, thus influencing policies such as fish consumption advisories for the region.

Although he's been at MSU for over 30 years, Sikarskie says he's nowhere near retiring. The "challenge of the future" is one he still embraces wholeheartedly. Since his youth, he has been "seeing things that I knew I was lucky to see, and wanting to be involved in preserving these things." He added, "I love what I do."

Wildlife and Natural Resources

Improving Fish Consumption Safety Through Community-Based Research

Geoffrey B. Habron

Associate Professor

Department of Fisheries and Wildlife College of Agriculture and Natural Resources Department of Sociology College of Social Science



Geoffrey B. Habron

Geoffrey Habron believes it is important not only to develop solutions to community problems and issues but also to involve community members throughout the research process. Dr. Habron got an early introduction to community-based projects during his

three-year experience with the Peace Corps in St. Lucia. He became interested in participatory action research and systems thinking while a graduate student. By integrating social and ecological factors in natural resource management, Habron aims, through his research, to improve natural resource and ecosystem management.

Habron's research has focused on fisheries management, community-based adaptive watershed management, and fish consumption safety. His recently completed "Improving Fish Advisories in Michigan's Upper Peninsula" project integrated community-based research and outreach to improve the effectiveness of fish consumption advisories in four counties in the UP.

The project began in 2003, after the U.S. Agency for Toxic Substance and Disease Registry (ATSDR) identified concerns about the effectiveness of fish consumption advisories in the Upper Peninsula. The fish advisories appeared to be failing to provide adequate information on the benefits and risks of eating potentially contaminated fish, particularly with respect to minority populations.



Site of angler interviews, Deer Lake, Marquette County. Sign warns of fish contamination.



Restaurant sign advertising fresh fish, Brimley, Chippewa County.

With funding from ATSDR, Habron and his co-investigators worked with community members and local organizations to identify ways to improve the risk communication strategy in the UP. In partnership with Ronald Kinnunen of MSU Sea Grant; John Hesse of MSU Fisheries & Wildlife; graduate student Melanie Barbier, who is herself from the UP; and Joan Vinette of MSU Extension, Habron put together a research team with the local knowledge and on-the-ground contacts necessary for such a project to succeed. This was particularly important given issues of trust since Habron wasn't initially known to these UP communities. There were also logistical and distance challenges related to doing research so far from the MSU campus. To maximize information sharing, Habron maintained contact with the Michigan Inter-Tribal Council, which was doing similar research specifically targeting the UP's Native American population.

Community residents in Alger, Chippewa, Gogebic, and Marquette counties were asked about their knowledge of fish safety and how they preferred to receive fish advisories. In designing the research, Habron's team partnered with diverse, county-based public advisory committees that included women and children, as well as representatives from the charter

boat business, the medical profession, and county health departments.

Targeted focus groups were then held with women, youth, recreational fishers, and an environmental group, and similar community dinners were open to anyone. The sessions were held in community facilities such as restaurants, a public library, and courthouses.

"Sustainability requires community members to learn to ask their own questions and to develop their own process that incorporates integrated planning, action and reflecting."

Geoffrey B. Habron

Habron's team compared community views with existing environmental conditions to assess knowledge gaps regarding possible fish contamination. The research findings are helping Michigan fish consumption advisories improve their educational programs and activities on fish safety. As Ron Kinnunen, of MSU Sea Grant, noted, "It was a learning experience both ways."

This project well illustrates Habron's community-based approach to research and his view that "sustainability requires community members to learn to ask their own questions and to develop their own process that incorporates integrated planning, action and reflecting."



Graduate student Melanie Barbier (standing, center) distributes materials to community participants, Brownstone Inn, Alger County.

Environmental Science & Policy Program

The Environmental Science and Policy Program (ESPP) was established in 2003 as an umbrella for environmental research and graduate education at MSU. ESPP's Web site (**environment.msu.edu**) centralizes information about the wide array of environmental efforts at MSU. It includes an "experts" database, with information about 180 faculty members, for easy access by media and the public.

ESPP initiatives include: partnerships in graduate education and research with Zhejiang University in China; ongoing activities on climate change in the Great Lakes region to bring together MSU researchers, engage with decision makers, and make MSU a hub for work on this critical issue; engagement to consider the human and environmental dimensions of the bioeconomy; and graduate specializations that explore diverse disciplinary perspectives on the environment.

Knight Center for Environmental Journalism

The School of Journalism's Knight Center offers classes and professional workshops for the study and practice of environmental journalism. Faculty conduct research and attract environmental experts and journalists from around the world as guest lecturers. Environmental iournalism students can gain practical experience by writing for EJ Magazine, the center's award-winning student publication. The Center also publishes Great Lakes Echo, an online news service that provides original environmental news stories of the Great Lakes region, and maintains the Meeman Archives, a collection of more than 7,000 outstanding environmental journalism articles from the past 20 years. For more information see ej.msu.edu.

Recent Knight Center Projects

- Detroit High School Workshop Since 2006 the center has organized an annual workshop on environmental, health, and science journalism for students from 14 Detroit high schools. Students learn about interviewing, reporting, and writing on vital scientific issues. Top journalists, scientists, and health experts participate in topical presentations; students then write articles for their high school newspapers and enter the articles in a journalism contest that is judged by MSU. In four years more than 850 students have participated in the day-long workshop.
- Alaska Climate Change Study
 In August 2008 the Knight
 Center took a dozen journalists
 to Alaska to study climate change.
 The goals were to educate them
 about how to report accurate,
 scientific information to the public
 and improve the science content
 of climate change news reports.
 Video of the Alaskan presentations
 is now being incorporated into
 MSU coursework.

Agriculture and Rangelands

By sustainability, we refer to the stability of a system over time. Two related concepts are key here, resilience and resistance. Resistance is the likelihood that a system will respond to a disturbance such as drought or pest invasion... Systems with greater resilience return rapidly and reliably to the original conditions.

MSU Sustainable Agriculture & Food Systems Initiative, Soil Ecology & Management Cluster. (n.d.). Introduction to soil ecology and management. Retrieved May 21, 2009, from: safs.msu.edu/soilecology.



Sheep survey grazing options on rangeland infested with invasive weeds. Exclosures in background keep sheep out of research plots in which different weed control methods are being tested in collaboration with a ranch owner.

The Mainstay of Humanity: Grasslands Research

Carolyn M. Malmstrom

Associate Professor Department of Plant Biology College of Natural Science

According to Carolyn Malmstrom,

"Grasses are the mainstay of humanity, feeding people both directly through grain production and indirectly through supporting milk and meat production. Two-thirds of our calories come from grasslands. These are the ecosystems most impacted by people." Lands with good soil and water availability are converted to grass crops, as in the central

Photo by Paul Phipps, UDE

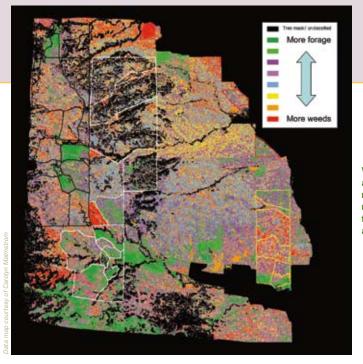
Carolyn M. Malmstrom

U.S. prairies. Other places with poorer soils are used for grazing, as in the Sahara or the western United States.

Dr. Malmstrom's lab studies the

ecosystem dynamics of disturbances such as the introduction of exotic species, which can become invasive. Semi-arid grasslands in California, where she is just now finishing up a major USDA-funded research project, are a case in point. Malmstrom noted that there have been "two major changes in the region's vegetation over time. First the native perennial grasses were replaced by annual forage grasses that were introduced with the Spanish settlement. These species do not have the same conservation value as the original native perennials, but they produce good forage and for a long time they were the mainstay of ranching. But now these introduced species are being replaced by a new wave of noxious weeds with little to no forage value."

Why are the weeds taking over? "The weeds don't have the same seasonal timing," explained Malmstrom. "The forage grasses are cool-season species that avoid the summer drought. They germinate in November and grow through the rainy winter. Their growth really takes off in March; then they flower in April and have usually set seed and died by May. The weeds are able to hang on longer and stay green into June. We wanted to know how they do that, when there's so little rain between May and October in this system."



Weed patch distribution across California rangeland watershed under study, derived from time series of aerial photography.

To find answers to this and other questions, Malmstrom and her team worked closely with local ranchers and conservation agencies. "The ranchers are interested in reducing the weeds and restoring the forage grasses, along with some

native perennials," she said. "They made suggestions about what they thought was happening and we brought in scientific tools to experiment further. We worked together to conceptualize and test hypotheses."

The partners started to see solutions when they looked at the timing of grazing. "It's

intuitive to graze at the peak of the forage grasses' growth in spring, when they're the most lush and green. But it turns out this creates more weeds," said Malmstrom. "If you graze in the spring, it depletes the good forage at the time it's using the most water—thus leaving more moisture for the weeds that come later." And, in fact, the ranchers started to have more success when they switched to grazing in the fall.

Malmstrom values the ranchers' contribution to her project. "All of them are thoughtful and strive to be good stewards," she said. "All of them have other jobs that help support their ranching operations. Through these

jobs, they absorb the cost of preserving the open-space view and wildlife habitat that we all enjoy." However, she cautioned, "It's important to be culturally sensitive. Academics don't always understand the partner's point of view. For example, you need to pay attention to functional details on a ranch—leave the gate

the way you found it! Remember whether it was open or closed when you went through."

Graduate assistant Abbie

Schrotenboer (L) and

the MSU greenhouse.

Carolyn Malmstrom (R)

check grass samples at

The project has also strengthened Malmstrom's conviction that "basic and applied science are not opposites."The goal of her work is to "illustrate processes that are basic and also important to realworld applications," she said.

Spotlight on Engaged Student Scholarship

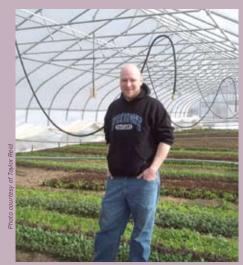
Creating Resources for First-Time Farmers

TAYLOR C. REID

Ph.D. student, Department of Community, **Agriculture, Recreation and Resource Studies College of Agriculture and Natural Resources**

As food systems become increasingly globalized and consolidated, Michigan has experienced a decline in traditional family farms.

MSU Ph.D. student Taylor Reid noticed a reaction to this decline in the form of an increase in demand for locally-grown organic foods and the growth of small, new farms on the urban fringe to meet that demand.



at the MSII Student

Reid's research focuses on these first-time farmers, their motivations, and the unique obstacles they face. Their dilemmas often include a lack of resources, knowledge, and experience. While this is not always a detriment—lack of traditional knowledge often leads to creative problem-solving—Reid hopes to support first-time farmers in their efforts.

In 2008, Reid launched the Beginning Farmers Web site (beginningfarmers. org) as a resource for new farmers. Reid explained, "By bringing together information and individuals we hope to provide a forum for sharing ideas that facilitate discussion and resources related to the process of starting new farms."

Agriculture and Rangelands

Short- vs. Long-Term Goals in Agriculture: Mediating the Trade-offs

Sieglinde S. Snapp

Associate Professor, Department of Crop & Soil Sciences and Kellogg Biological Station College of Agriculture and Natural Resources

Sieg Snapp is fascinated by how farmers make decisions. "There's a gap between what researchers are interested in and what farmers want," she said. "Researchers want long-term trials; farmers want results right now."

Dr. Snapp sees her job as bridging the gap between the two. "It's an area that MSU is good at," she said. "What we do is link ecological knowledge with stakeholder experience."

A few years ago, while she was working in Africa, Snapp pioneered a method for doing just that. Her process has been dubbed "mother-and-baby trials." Researchers at a large, centrally located "mother" site test new technologies using conventional experimental designs. Smaller "baby" trials, carried out at participating farms nearby, allow the farmers to select the specific new technologies they are interested in for what Snapp calls a "relevancy test" of labor costs and other practical issues.



Staying in the black: Cover crops can help develop soil biodiversity and resilience.

"We start by building an advisory group of farmers, educators, and buyers," said Snapp, "and bring the best ideas to long-term research trials. Then it's back to the farmers to pick from those, and back again to the researchers for broader applications. We always include a farmer pick and a researcher pick. Agricultural research has to have both short- and long-term uses."

The tradeoff point between short- and longterm benefits is a classic problem in agriculture. High-yield plantings are more profitable, but can deplete the soil. On the other hand, farmers may not be able to wait for the 10 years or so it takes a cover crop (a planting intended

to prevent erosion from bare fields over winter) to develop soil biodiversity and resilience. They may not have the resources to apply a cover crop in the first place.



Sieg Snapp (L) and Ms. Mazungu (R), a technical assistant and farmer in Zomba, Malawi, in front a perennial legume/maize interplanting. The two have worked together for almost 15 years.

Snapp believes that the key to solving the dilemma is finding approaches that mediate between these needs. "In Malawi, we found that farmers were more likely to plant a diversified cover if it had a small bonus value such as something to sell, or to feed to their children. And solutions are very location-specific. Livestock are common in Zimbabwe, so using manure is a feasible option there. There isn't much livestock in Malawi, so it isn't an option."

Snapp continues to learn from collaborating with farmers. "Farmers want to know the underlying biology," she said. "If our recommendations don't work, they want to know why. The industry is innovative. It changes fast. Clean water, soil quality, biodiversity—productivity is primary, but we also need to protect the land."

"Mother-and-Baby" Trials are Used Around the World

- Researchers are using Dr. Snapp's trial design in Africa (15 countries), Southeast Asia (6 countries), and Latin America (5 countries).
- A 2006 article by Lançon et al.¹ noted that "the design was...particularly welcomed by the farmers, and could be the central piece of a participatory evaluation design in an organised sector."
- A 2003 "Success Stories" bulletin from International Center for Soil Fertility and Agricultural Development (IFDC)² reported that based on exposure to the "Mother-Baby" trials and farmer feedback, several new varieties of maize had entered the national certification process for release in Kenya.

¹Lançon, J., Lewicki, S., Viot, C., Djaboutou, M., Cousiño, J.-C., & Sêkloka, E. (2006). Creating bonds in the cotton sector: Participatory breeding in Benin and Paraguay. *Cahiers Agricultures*, *15*, 92-99.

² International Center for Soil Fertility and Agricultural Development. (2003). Managing soil, water and nutrients for maize based cropping systems in eastern Africa. Retrieved June 10, 2009, from ifdc.org.

The MSU Student Organic Farm

MSU's Student Organic Farm (SOF) got its start in 1999, when students eager to apply their agricultural knowledge combined forces with John Biernbaum, professor of horticulture, who was equally eager to research four-season farming using hoop-houses.

Since then the 10-acre, year-round farm has grown to include six hoop-houses, a chicken project, a bee project, a certificate program in organic agriculture, an outreach program in organic and year-round production for urban and rural growers, a community-supported agriculture (CSA) program, an on-campus farm stand, and sales to MSU dining halls.

The farm welcomes community members who want to take tours or spend some time volunteering. The SOF Web site (msuorganicfarm.org) offers information gleaned from extensive research at the farm. Weekly newsletters are archived on the Web site, where you'll also find recipes and information on upcoming events.



"While my ultimate interest lies in the blending of ornamental and edible landscaping, the foundation that the certification program will provide me will be invaluable."

Karin Turmelle

"There is incredible potential in the Lansing area for urban agriculture and I hope to work with local schools and community centers on transforming vacant land into community gardens."

Denae Freidheim

"I'm hoping that obtaining an Organic Farming Certificate will enable me to enjoy a career in organic agriculture."

Mary Kirsch

From: MSU Student Organic Farm Newsletter, March-April 2009 issues. Reprinted with permission.











Green Energy

Sustainability is neither simple nor easy. Rather, it is a matter of awareness, of understanding relationships, and of balancing many, often contradictory, variables. It is a way of thinking about how we behave and consume on a daily basis.

University Committee for a Sustainable Campus. (2007, April). Campus Sustainability Report (p. 9). East Lansing: Michigan State University, Office of Campus Sustainability.



"This program has given the kids a sense of what they can do and what avenues they can reach. Angie, her husband, and the partners she's brought on board are so down to earth—they make the kids feel like they're a part of it. They're making our kids feel empowered."

Carmen Y. Turner, President and CPO Boys & Girls Club of Lansing



Angie Calabrese Barton helps students import graphs into movie-editing software.

GET City: Youth Exploring Energy Technologies

Angela M. Calabrese Barton

Professor
Department of Teacher Education
College of Education

Lansing has been hit hard by the downturn in the automotive industry and continuing high levels of unemployment in Michigan. These problems were compounded by 2008's high cost of gas, leading some to explore possible solutions to these problems through biofuels. Others, including researchers like **Angela Calabrese Barton**, have been looking at these processes for years.

"We started our program one year before the gas crisis," Dr. Calabrese Barton said. "It's a focus that the state has been trying to take."

The program is Green Energy Technologies in the City (GET City), a collaborative effort between Angela Calabrese Barton in the College of Education, Scott Calabrese Barton in the College of Engineering, and the Boys and Girls Club of Lansing. Funded by a grant from the National Science Foundation, this year-round program serves two cohorts of 34 middle school students each and engages the students in both science issues and information technology skills.

Students have investigated potential community impacts of policies, such as the research they conducted in 2008 on a proposed (though eventually rejected) plan by Lansing Board of Water and Light for a new hybrid power plant. The students learned about biomass and discussed clean coal. "We unpacked the myths that were on TV," Calabrese Barton said. Students made 30- and 60-second public service announcements on energy conservation and presented research in public forums in Lansing.

More recently, the students conducted a survey for Lansing Mayor Virg Bernero's office on the Greater Lansing Go Green! initiative. They have also made podcasts on biomass, which is renewable but doesn't burn very cleanly, and were one of the few children's groups to present at the "Green Today, Jobs Tomorrow" conference, sponsored by Michigan's Department of Labor and Energy, in May 2009. This work helped the students construct identities as expert scientists and engineers, and Calabrese Barton has data to confirm that kids who never thought about science and engineering careers are now considering them. It helps, of course, that their research is being taken seriously by policy makers, including the Mayor's office. Calabrese Barton reported that "One of the students, an eleven-year-old girl, said, 'We're the make-a-difference experts."

The outcomes of this work are perhaps most obvious for the participants themselves, but Calabrese Barton's own research and teaching methodologies have been challenged



Students in the GET City program visit the Lansing Board of Water and Light's energy efficient power plant.

as well. Teachers or volunteers with youth programs may operate from a specific curriculum, but, she said, "your work is always framed around what is happening with the students at the moment." With the critical ethnographies that Calabrese

Barton conducts, and by working with a broad spectrum of partners as she does with GET City, she is constantly required to reframe her work—to ask herself what research questions, and what products and outcomes, might matter to a wide range of audiences. Students in GET City are asking, "How can we do something more?"

One answer is an upcoming item on the GET City agenda, which involves adapting the highly localized curriculum for Boys and Girls Clubs nationwide, and determining how to link the work the students do in GET City more directly with what they are learning in the classroom. For more information, visit **getcity.org**.

Walking the Talk... How Green is MSU?

MSU is a nationally-recognized "green" university—for reasons that include campus operations as well as the curricular and programmatic innovations noted elsewhere in this issue. A few examples are included here.

LEED®-NC Rating System

The LEED®-NC (Leadership in Energy and Environmental Design—New Construction) green building rating system was developed by the U.S. Green Building Council, of which MSU is a member. LEED is a voluntary national rating system to support the development of high-performance, sustainable buildings. Criteria include sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. Major MSU renovation projects must comply with LEED standards. MSU "LEED" buildings include the Chemistry Building addition, the new MSU Surplus Store and Recycling Center, and the Kellogg Pasture-Based Dairy facility. For more information visit usgbc.org.

MSU Bikes

The MSU Bikes Service Center promotes bicycling as a fun, economical, environmentally friendly, and healthy transportation alternative. MSU Bikes refurbishes abandoned and donated bicycles to rent or sell to the campus community. The yearround operation also offers full repair services,



MSU Bikes Service Center staff.

accessories, a free 24/7 air station, and safety and maintenance workshops. It advises university planners on future improvements to the campus infrastructure for better and safer bicycling. For more information visit **bikes.msu.edu,** e-mail **bikes@msu.edu,** or call (517) 432-3400.

Office of Campus Sustainability

The Office of Campus Sustainability fosters a collaborative learning culture that envisions MSU as a sustainable community, providing for the social and economic needs of its current and future members without compromising the health of the biosphere. Projects undertaken by the Office include a comprehensive assessment of economic, environmental, and social health indicators across campus (2003, updated 2007), as well as an online newsletter, calendar of events, and media center. The Office also leads an initiative to develop an internal Green Certification Program. For more information visit **ecofoot.msu.edu**.

Recycling and Waste Management

In January 2008 the MSU Board of Trustees authorized a new recycling facility to be located west of Farm Lane. A more comprehensive recycling program, coupled with the new facility, will allow the university to triple the amount of materials currently being recycled and expand recycling collection in all buildings. For more information visit **recycle.msu.edu**.

Green Energy

"It's easy to see the impact of our research, and it looks like a direct outcome of our funding—which it is—but the work with the students is the most important...students can see what research is done outside academia."

Milton R. Smith III

Clean Chemistry

Robert E. Maleczka, Jr., Professor Milton R. Smith III, Professor Department of Chemistry College of Natural Science

Cutting out energy-intensive steps and producing clean byproducts from chemical reactions is what the research of Rob Maleczka and Mitch Smith is all about. It began with an informal conversation between the two chemists, who are in separate branches of the field. "Our collaboration was born out of a common interest in a class of chemical reactions known as crosscouplings," Dr. Maleczka explained. A coupling reaction describes the set of reactions when two hydrocarbon fragments are coupled with the aid of a metal-containing catalyst. In a cross-coupling, two different molecules react to form one new molecule. Their first experiments, which focused on making a certain kind of coupling called a Suzuki reaction catalytic in boron, were unsuccessful, but, as Maleczka said,

"the chemistry surrounding that idea flourished."

For several years Dr. Smith and Dr. Maleczka have been investigating boronic acids (bonds between carbon and boron), which are used widely as intermediates in pharmaceutical and agrichemical research to discover new drugs and pesticides. Traditionally, byproducts of petroleum processing would first be chlorinated and then reacted with a metal, such as magnesium; finally, the resultant compound would be reacted with boron. As Smith pointed out, "Each one of these steps generates a lot of waste, and the byproducts can be toxic." He and Maleczka, on the other hand, have discovered that they can directly react the petroleum byproducts and boron with a catalyst to get the same results. "It cuts out a lot of energy-intensive steps," Smith said. "The only byproduct is hydrogen gas."

This discovery led to a number of awards, including the Presidential Green Chemistry Challenge Award in 2008. While they can't cite specific examples of how their discovery is being used commercially for confidentiality reasons—



Rob Maleczka and Mitch Smith (back row, left) and their students were honored with the 2008 Presidential Green Chemistry Challenge Award.

Dr. Maleczka explained that "a number of pharmaceutical companies have used the chemistry themselves, but they tend not to share the specific compounds being reacted"—they have founded the startup company, BoroPharm, located in Novi, Michigan, to manufacture and sell compounds using their process.

Certainly, Smith acknowledged, the research is significant; but he believes that the actual outcomes are less important than training students as scientists. "It's easy to see the impact of our research, and it looks like a direct outcome of our funding—which it is—but the work with the students is the most important," he said. Both undergraduate and

id You Know...

MSU is piloting a plan to save money and reduce greenhouse gas emissions on campus without requiring major investments or drastic changes.

During the 2008-2009 academic year, seven buildings participated in a pilot program to schedule evening classes and other events more efficiently. As a result of the project, energy reductions in the seven buildings ranged from 2 percent to 20 percent. This percentage decrease represents savings of 211 megawatt hours, 137 tons of carbon dioxide, and \$16,904.

The easiest way to reduce energy consumption is to reduce the amount of time the heating, ventilation, and cooling (HVAC) system runs. In the past, many buildings have been kept open with the HVAC running during only one or two evening courses or events.

"We...simply relocated the classes to higher-utilized buildings nearby," said Lynda Boomer, energy and environmental engineer with the Physical Plant. Classes and other events were typically moved to a building next door or in the same geographic area.

The university will expand this program to include more buildings in the upcoming academic year. The classroom consolidation initiative was one of 50 recommendations produced by the Environmental Stewardship Initiative, "Be Spartan Green."

For more information, visit **bespartangreen.msu.edu**.

Adapted from a story by MSU Newsroom, June 24, 2009.

Residential Initiative on the Study of the Environment

graduate students can see what research is done outside academia. Undergraduates in the labs, for example, can see what it's like to conduct research, and from there make the decision as to whether they want to work immediately with industries or pursue a graduate education. The graduate students, meanwhile, get to perform experiments, learn how to analyze the outcomes, and use them to guide future work. In research, as Smith pointed out, "you don't know what the outcome's going to be."

Smith held up the research with borons as an example. An important piece of their breakthrough had actually been observed by another research group, who ignored it because it wasn't the information they were looking for. He also pointed out that on the surface, their discovery looked so inefficient that no one in industry would have pursued it. But in the university environment, Smith, Maleczka, and their respective teams of students were able to experiment and innovate. "It's really the students who are doing the legwork that makes discoveries possible," Smith said.

Photo courtesy of University Relations



Old Horticulture
Hall is one of
the buildings
used in MSU's
classroom
rescheduling
program to
reduce energy
consumption.

RISE is a living-learning program for MSU students interested in stewardship of the environment. RISE students get their feet wet and their hands dirty applying knowledge to reallife problems and projects. The program offers two different ways for students to be involved:



• Residential program (for incoming

freshmen). Students live together with other RISE students on designated floors in Hubbard Hall. They enroll in special reserved sections of chemistry, math, writing, and biology, and participate in field activities with the program coordinator and resident mentors. RISE students have conducted energy audits in MSU residence halls, lobbied state legislators to pass a bill prohibiting garbage from other states from entering Michigan, gardened with elementary school children, and mapped contamination from a Superfund toxic waste site.

• Environmental studies specialization. This specialization is added to a student's major after the freshman year. Students do not need to be in the residential program to add the specialization. Any student with a major in one of the participating colleges can be involved in RISE.

Visit natural science.msu.edu/students/rise for more information.



Top and above: RISE students teach elementary students from Lansing about soils, compost and farming at the MSU Student Organic Farm.

Sustainable Economic Development

Sustainability is an example of what is called a "wicked problem"... Wicked problems are characterized by several features: No definitive formulation of the problem exists; its solution is not true or false, but rather better or worse; stakeholders have radically different frames of reference concerning the problem; constraints and resources for solution change over time; and, the problem is never solved.

Peterson, H. C. (2008, May). Transformational supply chains and the "wicked problem" of sustainability. East Lansing: Michigan State University. Available from: smep. msu.edu/seminars.asp.

Giving Rights to Trees: Fair Trade and Sustainability

Paulette L. Stenzel

Professor of International Business Law Department of Finance Eli Broad College of Business

Paulette Stenzel is following the Fair Trade movement, especially as it develops in Latin America, with great interest. Along with other advocates for Fair Trade, Dr. Stenzel believes there is a direct connection between ethical business practices and sustainable development. "The link between environmental degradation and trade globalization has become increasingly clear," she said. "Developing countries invite new industries into their borders because their citizens desperately need jobs. In order to survive, they are forced to allow development that destroys natural resources."

Stenzel argues that businesses must take responsibility for environmental and socioeconomic outcomes that are directly related to their activities. "There is legal precedent for this view," she said. "As early as the 1950s, economists were urging businesses to accept responsibility for these effects. Today, many companies realize that sustainability efforts must be based on the triple bottom line of economy, social equity, and environment."



Paulette Stenzel shops at Kirabo, a Fair Trade store in East Lansing, Michigan, owned by MSU alumna Gail Catron.



Fair Trade merchandise from Kirabo.

What Is Fair Trade?

- Farmers receive a guaranteed minimum price with a premium for organic products.
- Workers have safe working conditions and living wages.
- Importers purchase directly from producers as often as possible.
- Farmers decide democratically how to invest their revenues.
- Fair Trade premiums are invested in social and business development projects.
- Farmers use environmentally sustainable methods.

Adapted from: TransFair USA. (2004). Fair Trade overview. Retrieved June 8, 2009, from: transfairusa.org/content/about/overview.php.

"Ecuador is the first country in the world to give legal rights to nature, but many questions remain with respect to who will be able to bring legal action to enforce those rights and how courts will define them."

Paulette L. Stenzel

Stenzel serves as a monitor and analyst of Fair Trade progress in Central and South America. She travels extensively throughout the area and was in Ecuador during October of 2008, a few days after the country's new constitution was ratified by a large majority. "Ecuador is the first country in the world to give legal rights to nature," she said, "but many questions remain with respect to who will be able to bring legal action to enforce those rights and how courts will define them."

Stenzel's role is to report back to the international scholarly, legal, and business communities on how such policy changes play out in practice. Her research methodology is well suited to the cultural context within which she works."Although the movement is large, individual advocacy groups are mostly small; linkages among activists are personal," she said. "One person leads to the next person who leads to the next one. It's all about relationships and trust. If you go there and don't speak the language, or only talk to corporate executives, you will miss important perspectives and information. You have to learn to listen, and not impose."

Stenzel shares her observations in a variety of formats, from a personal Web site (**tradeandsustainability. com**) to the lecture circuit. Based on her reputation in the Fair Trade community, she has also been invited to serve as an editorial board member for an annual anthology, the *Global Fair Trade Reader*, of the Fair Trade Institute. It is a peer-reviewed publication, the first of its kind in the field.

David Finet, Gail Catron, and Julie Cotton served on a Fair Trade panel in Prof. Stenzel's business class.







Gail Catron of Kirabo.



Julie Cotton of MSU's Sustainable Agriculture and Food Systems Specialization.

The premier issue of the anthology, which is expected to appear during the fall of 2009, will include an article based on Stenzel's research in Nicaragua. In September 2007 she went to Nicaragua to learn from the managers and producers associated with Esperanza en Acción ("Hope Through Action"). Esperanza offers technical assistance to artisan groups throughout Nicaragua and helps connect producers to local and international markets.

Ms. Julia Holmer, an organizational developer for *Esperanza* who accompanied her on visits to artists affiliated with the organization, places a high value on her association with Stenzel. "Paulette Stenzel has added depth to my personal study and work with Fair Trade," she said.

"She understands that Fair Trade is not its own separate thing, outside of the mainstream economy. In fact, Fair Trade is trade. It is simply one way of carrying out business which takes into account all aspects of sustainability, especially that of the producers...I believe Dr. Stenzel understands this and her voice is important in academic and business circles."







Sustainable Economic Development

Fueling Michigan's Biobased Economy

Bryan K. Ritchie

Associate Professor of International Relations James Madison College

Associate Director, Office of Biobased Technology Co-director, Michigan Center for Innovation & Economic Prosperity

How can Michigan State University connect its biobased technology expertise with private sector partners in a way that helps the partners, facilitates the research taking place on campus, and re-invigorates Michigan's economy? That's the challenge **Bryan Ritchie** has been addressing for the past year. Having spent more than 10 years in the computer industry as an entrepreneur before entering academe, Dr. Ritchie is more than up to the challenge, as evidenced by the partnerships he has already helped create.

Re-energizing Michigan's entrepreneurial and innovative spirit by creating relationships between University researchers and the private sector and mobilizing the under-utilized talents of MSU students, especially undergraduate students, in these efforts, is part of Ritchie's mission.

As Associate Director of the Office of Biobased Technology (OBT), Ritchie leads its external alliances and strategy. Instead of the "traditional" model—inviting potential partners and funders

to come look at the university's various assets and programs—Ritchie has customized what he calls "partnerships of discovery," in which he asks potential partners to tell him what challenges they face, including technical, social, political, and governmental. He then draws together a team capable of addressing those issues. This approach effectively targets exactly what the firms need, and helps them solve their problems while faculty pursue their scholarly research. Ritchie also helps direct companies to MSU's resources through a kind of "one-stop shop" for potential partners.

In addition, Ritchie connects partners with MBI International, a wholly owned subsidiary of the MSU Foundation, led by Dr. Bobby

MBI's state-of-the-art bioprocessing plant, located adjacent to the MSU campus on Collins Road in Lansing, Michigan.



Bobby Bringi, Bryan Ritchie, and Bruce Dale (L to R) discuss design of specialized equipment for biomass testing in Prof. Dale's laboratory. The lab develops and studies methods designed to convert biomass into useful fuels.

Bringi, president and CEO. With MBI, MSU has created "BioCollaborate," where partners can have their scientists work side by side with MSU and MBI scientists. For example, scientists from Denmark-based Novozymes are currently working with MSU to test ammonia fiber expansion (AFEX), a patented technology that MSU owns, with Novozymes' enzymes. When a new product is developed jointly, MSU and the company involved jointly license it.

In the past year, Ritchie has helped create the groundwork for several partnerships that he believes are the beginnings of long term relationships with private sector companies such as Vermeer Corporation, in Pella, Iowa; The Andersons, Inc., in Maumee, Ohio; and Novozymes. Another partnership is being formed with the U.S. Department of Energy's National Renewable Energy Laboratory.

Ritchie's work with the Michigan Center for Innovation & Economic Prosperity complements his efforts with OBT. The Center works to connect undergraduate and graduate students in research partnerships with companies such as IBM and Infosys, which allows students to do applied research in a real world environment. This is also a way to keep MSU graduates and their talents in Michigan rather than have them leave the state for jobs elsewhere. The Michigan Economic Development Corporation is co-sponsoring this work.

The area of biobased technology and entrepreneurship presents many opportunities for economic development and prosperity in Michigan. "We have tremendous assets within the university—including faculty and students, especially students," said Ritchie. "We need to connect all of these to the private sector." Ritchie is not only creating partnerships that will benefit Michigan's biobased technology economy in the present; he is also helping to create local jobs and ensure that his students will continue to apply their innovative ideas and entrepreneurial and research skills in Michigan's economy well into the future.



Sponsored by MSU's National Center for the Study of University Engagement (NCSUE), the Outreach and Engagement Measurement Instrument (OEMI) gathers data about the outreach activities of MSU faculty and academic staff. The information is self-reported and participation in the annual survey is voluntary. Data for 2008 was collected between January and March 2009 and represents the fifth year of data collection; 1,101 faculty and academic staff responded to the survey. Since 2004, 2,539 distinct (nonduplicative) respondents have reported their outreach and engagement through the OEMI. For this snapshot, OEMI data is augmented with data from the service-learning and civic engagement student registration system.

OEMI results for 2008 include the following:

\$19,637,429.71

Value of salary investment by MSU faculty and academic staff in addressing issues of public concern (data from those reporting outreach activities on the OEMI)

98.1%

Respondents whose outreach contributed to achieving Boldness by Design (BBD) imperatives:

78.2% Enhanced the student experience

75.4% Enriched community, economic, and family life

47.5% Expanded international reach

68.6% Increased research opportunities

57.0% Strengthened stewardship

1,151

Number of specific projects/activities reported

Of the respondents who described specific projects/activities:

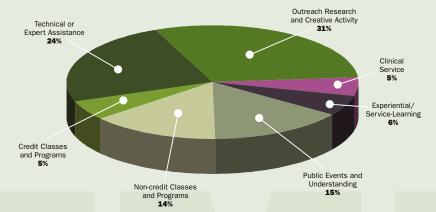
49.3% Reported working with external partners

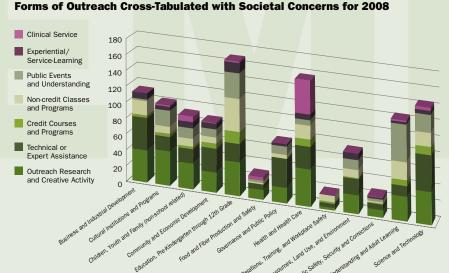
44.7% Reported having created intellectual property and scholarly outcomes

36.1% Reported that their outreach work impacted their scholarly or teaching practices

NATIONAL CENTER FOR THE STUDY OF UNIVERSITY ENGAGEMENT

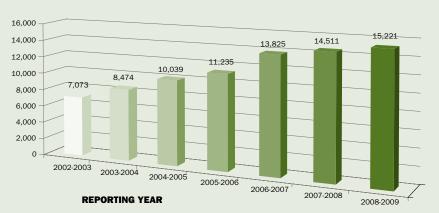
Forms of Engagement Reported by MSU Faculty and Academic Staff in 2008





The number of "responses" is greater than the number of "respondents." Respondents were given the opportunity to describe

Number of Student Registrations for Service-Learning Received and Accommodated (2002-2009)





Outreach and Engagement at Michigan State University



Each issue of The Engaged Scholar Magazine features a brief "think piece" about the theory and practice of engaged scholarship. For this issue Soji Adelaja, director of MSU's Land Policy Institute, offers his thoughts about land use—a key component of sustainability—and how Michigan State University is providing leadership in this area.

The World is Changing and So is Land Use

Soji Adelaja

John A. Hannah Distinguished Professor in Land Policy **Director, MSU Land Policy Institute**

The world has changed dramatically in recent years and we at MSU have stayed current.

This is no small feat. Each day, society is demanding more university involvement in new areas in which scholarly intellect can benefit public welfare.

As MSU President Lou Anna K. Simon said at the 2009 Michigan Land and Prosperity Summit, "For we intellectuals who see our role as marginal and incremental, this is the time to be bold and transformational—to recognize that what we do is the very ingredient needed to transform our state and nation."

MSU's professors and research staff have strived for years to build a modern infrastructure of research and delivery in land use policy and growth strategy that is relevant to Michigan, addresses the problems of local and state decision makers, and increases the presence and visibility of MSU as a leader in land use research.

We've positioned ourselves at the forefront of emerging land use issues—issues that define the prosperity and performance of places. We have embraced the notion that our efforts must be guided by the realities of today and tomorrow, not the ones from which we have come.



Faculty and researchers at Michigan State University are pioneering studies and applications of renewable energy.

The new economy has strong implications for how we view land policy. In Michigan, traditional land use concerns have almost disappeared overnight. In the past, community planners, economic developers, and policy makers focused largely on ways to manage bad growth. Zoning, traditional planning, and farmland preservation were among the tools that MSU research helped inform.

But in today's economic downturn, sprawl is not the main issue. Instead we find ourselves in a more complex world of competition. Land policy has become a tool by which states and regions can shape their own future—or not.

Anticipating this some time ago, the Land Policy Institute focused its research and outreach agenda on regional placemaking, sustainable growth strategy, and prosperity science. If we had not adopted this agenda, MSU would have missed the opportunity to be a pioneer and major force in shaping progress as Michigan struggles to transform its communities and leaders from the old to the new economy. We have now become the only university in the nation with this type of infrastructure and impact, the one that policy makers look to first for insight into these important issues.

"We have now become the only university in the nation with this type of infrastructure and impact, the one that policy makers look to first for insight into these important issues."

Soji Adelaja

The emerging competition for land for renewable energy—wind, solar, biofuels—illustrates this point. The challenges that these will pose may equal, if not surpass, those of sprawl. On the other hand, the development of renewable energy is a crucial strategy that will enable our state to capitalize on opportunities within the new economy.

Renewable energy work is just one of many areas in which MSU's environmental policy work is at the forefront. The knowledge we create through our research, classroom teaching, partnerships, and community involvement is making a crucial difference in our state as we make the difficult transition to a new economy in which the quality of life is no longer guaranteed. As residents we can no longer chase our past. We must instead invest in our future. As President Simon has said, we as scholars must take risks and we must lead.

As a land grant scholar who believes in the historical mission and who has spent his entire career exploring ways to better connect knowledge to society's needs, I cannot think of a better place to be than Michigan State University, as we engage a changing world and help shape it for the benefit of others.

AWARDS AND RECOGNITIONS

MSU Receives C. Peter Magrath/ W. K. Kellogg Foundation Engagement Regional Award

Professor William S. Davidson's Adolescent Diversion Project has been named the North Central Region winner of the 2009 W. K. Kellogg Foundation Engagement Award. The regional award places the project in competition as a finalist for the national C. Peter Magrath University-Community Engagement Award. This year is the first time MSU has competed for the award. The Adolescent Diversion Project represents a collaborative agreement between the National Institute of Mental Health's Center for Studies of Crime and Delinquency, the MSU graduate program in ecological psychology, and the Ingham County Juvenile Court. The project was selected to represent MSU because of its long-running collaboration with community partners, the number of youth impacted by the project, the level of published scholarship, and continued federal grant support. For more information about the Magrath/Kellogg award and the 2010 RFP visit www.aplu. org/NetCommunity/Page.aspx?pid=304.

MSU's Student-Volunteer Program Honored with Presidential Award

In February MSU was presented with the 2008 Presidential Award for General Community Service, becoming one of only 18 colleges and universities—and the first in Michigan—to win the award since 2006. It is the highest federal recognition a college or university can receive for its commitment to volunteering, service-learning, and civic engagement. MSU's 41-year-old Center for Service-Learning and Civic Engagement is the oldest continuously operating student-volunteer program in the nation.

Red Cedar Writing Project Receives Outreach Scholarship Community Partnership Award

Janet A. Swenson of MSU's College of Arts and Letters and the Red Cedar Writing Project were the 2008 recipients of the Michigan State University Outreach Scholarship Community Partnership (OSCP) Award. OSCP gives University-wide recognition to highly engaged community-based research collaborations that positively impact both the community and scholarship.



2009 OSCP Award Winners (from left to right): Mitch Nobis, Toby Loftus, Renee Webster, Andrea Zellner, Janet Swenson, and Troy Hicks.

The award is conferred annually upon an MSU researcher and community partner, each of whom receives a stipend of \$1,500, and the co-recipients are recognized at the MSU Awards Convocation in February. For the full story see *The Engaged Scholar E-Newsletter* at: **engagedscholar.msu.edu/enewsletter/volume1/issue3/Swenson.aspx**.



News & Notes from UOE

ANNOUNCEMENTS

Graduate Certificate in Community Engagement

Beginning in fall 2009, this program will prepare MSU graduate students for academic careers that integrate scholarship with community engagement. The program is tailored for students in cooperation with their graduate advisor and University Outreach and Engagement. It includes both instruction and a mentored experience in community engagement. Participants completing the program receive a Certificate in Community Engagement and a notation on their academic transcript. Students from all colleges are eligible. To learn more, visit **outreach.msu.edu/gradcert**.

Tools of Engagement

University Outreach and Engagement has launched *Tools of Engagement*, a series of modules designed to introduce undergraduate students to the concept of university-community engagement and develop their research and engagement skills. The modules encourage students to critically reflect on the content, offering concrete examples that illustrate abstract concepts and asking them to come up with their own real-life situations. The five modules focus on working in groups effectively, negotiation techniques, and so on. They can be taken in consecutive or random order. Instructors can choose to integrate the modules directly into classroom presentations or assign students to complete them prior to class. For more information visit **outreach.msu.edu/tools**.

TRANSITIONS



Former MSU Museum Director **C. Kurt Dewhurst** took on a new role July 1, joining University Outreach and Engagement as director of arts and cultural initiatives. In this new position he will focus on strengthening connections between MSU and arts communities in mid-Michigan, statewide, and internationally.



Patricia A. Farrell, Senior Director of University Outreach and Engagement, joined MSU's Executive Management Team as Assistant Provost for University-Community Partnerships in June 2009.



Gary John Morgan has been appointed as Michigan State University Museum director, effective Sept. 1, where he will oversee Michigan's natural history and culture museum and the state's first Smithsonian Institution affiliate. Morgan, a native of Australia, has more than 25 years of experience in museum management, research, and wildlife conservation.

Mark your calendar...

September 28-30, 2009

10th Annual National Outreach Scholarship Conference at the University of Georgia

More information at: georgiacenter. uga.edu/conferences/ outreach_conference

October 8, 2009

Nominations due for the 2010 MSU Outreach Scholarship Community Partnership Award

For details about the nomination process, a list of past winners, and other information, see **msu.edu/unit/provost/awards.html**

November 12, 2009

Michigan World Usability Day Conference at Michigan State University

For more information visit: **usability.msu.edu**

About University Outreach and Engagement

University Outreach and Engagement (UOE) connects university knowledge with community knowledge in mutually beneficial ways. UOE assists academic departments, centers, institutes, and MSU Extension on priority issues of concern to society by encouraging, supporting, and collaborating with MSU faculty and academic staff to generate, apply, transmit, and preserve knowledge.

Hiram E. Fitzgerald Associate Provost

Michigan State University Kellogg Center Garden Level East Lansing, MI 48824

Phone: (517) 353-8977
Fax: (517) 432-9541
Web: outreach.msu.edu
E-mail: outreach@msu.edu

The UOE Associate Provost is supported by the advice of two important councils:

Outreach and Engagement Campus Senior Fellows, a group of faculty who have distinguished themselves through careers as engaged scholars

Outreach and Engagement Community Senior Fellows.

comprising leaders from government, business, foundations, and nonprofit organizations

For lists of these individuals, see outreach.msu.edu/people.asp.

Contact University Outreach and Engagement to learn how you can become more active in the MSU engagement enterprise.

UOE DEPARTMENTS

University-Community Partnerships • outreach.msu.edu/ucp

Patricia A. Farrell, Assistant Provost for University-Community Partnerships UCP facilitates research collaborations between MSU faculty and community-based partners to address a wide variety of societal issues.

Center for Community and Economic Development • ced.msu.edu

Rex LaMore, Director

Located in central Lansing, CCED works to improve the quality of life for people in distressed Michigan communities through responsive engagement, strategic partnerships, and collaborative learning.

Community Evaluation and Research Center • outreach.msu.edu/cerc

Laurie Van Egeren, Director

CERC provides a hub for university-based evaluators and conducts participatory program evaluation in the areas of education, youth development, early childhood, health, and community development.

Center for Service-Learning and Civic Engagement • servicelearning.msu.edu

Karen McKnight Casey, Director

CSLCE provides curricular and co-curricular service-learning and engagement opportunities for MSU students and helps faculty integrate service-learning into their courses.

Communication and Information Technology • outreach.msu.edu/cit

Burton A. Bargerstock, Director

CIT provides public access to information about university-wide outreach initiatives through the Internet, as well as consulting and product development services for Web sites, databases, publications, graphic design, and event management.

MSU Usability & Accessibility Center • usability.msu.edu

Sarah I. Swierenga, Director

UAC conducts research and evaluates new interface technologies to ensure that they are useful, usable, accessible, and appealing to a broad audience.

Wharton Center for Performing Arts • whartoncenter.com/education

Michael J. Brand, Executive Director

Wharton Center educational programs connect students to the performing arts by offering a wide range of programs suited to a variety of learner needs.

Michigan State University Museum • museum.msu.edu

Gary Morgan, Director

The MSU Museum reaches a broad public audience through collections, field- and collections-based research, public service and education programs, traveling exhibits, and innovative partnerships.

Estate and Wealth Strategies Institute • ewsi.msu.edu

Robert A. Esperti and Renno L. Peterson, Co-Directors

EWSI is a nonprofit organization dedicated to developing strategies for wealth, estate, business, and charitable planning.

National Center for the Study of University Engagement • ncsue.msu.edu

Burton A. Bargerstock and Laurie Van Egeren, Co-Directors

NCSUE is a national innovator, conducting studies about faculty roles and rewards as well as facilitating conversations on benchmarking, engaged scholarship, and scholarship of engagement.

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UNIVERSITY



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University Outreach and Engagement

Michigan State University

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Subscribe now.

University Outreach and Engagement's *Engaged Scholar E-Newsletter* is a quarterly supplement to *The Engaged Scholar Magazine*. The more frequent publication schedule allows for timely updates about upcoming events, partnerships, and other announcements. To subscribe, e-mail **esenews@msu.edu** or call Carla Hills at (517) 353-8977.



Outreach and Engagement