MICHIGAN STATE
UNIVERSITY

October 26, 2010

MEMORANDUM

To: Board of Trustees Finance Committee

From: Fred Poston
Kim Wilcox

Subject: The 2011-12 Appropriation Request

RECOMMENDATION:

BE IT RESOLVED that the Trustee Finance Committee recommends to the Board of Trustees adoption of the Appropriation Request, including needs for the University General Fund, the Michigan Agricultural Experiment Station, and the Michigan State University Extension.

BACKGROUND:

The Appropriation Request provides parameters that will guide development of MSU requests through the 2011-12 appropriation cycle. Action on the request authorizes the administration to respond to the Michigan Department of Management and Budget reporting requirements.

Attachments

Office of the PROVOST

Office of the VICE PRESIDENT FOR FINANCE AND OPERATIONS

C: Board of Trustees Policy Committee
President Lou Anna Kimsey Simon
William Beekman, Secretary to the Board
Robert A. Noto, Vice President for Legal Affairs and General Counsel
David Byelich, Assistant Vice President and Director

MICHIGAN STATE UNIVERSITY

Michigan State University 2011–12 Appropriation Request

Michigan State University (MSU) ranks in the top 100 universities in the world. It provides the undergraduate and graduate education, research, and outreach needed to compete and innovate in the global knowledge-based economy for the benefit of Michigan. The University is accustomed to identifying targeted outcomes, applicable measures, and critical priorities. A sample of key MSU benchmarks and operating accomplishments is included in Attachment A.

Whether by assisting in the creation of jobs for thousands of people, attracting funding for research that can change and even save lives, or simply enhancing contributions to the coffers of the State of Michigan (State) because its alumni earn high-end salaries, Michigan State University's economic impact of approximately $4.1 billion is essential to Michigan's current and future growth.

The three University Research Corridor (URC) universities, including Michigan State University, serve as engines for economic recovery in the state, making a $14.8 billion impact on Michigan's economy in FY09 and a return of $16 for every dollar the State invests, according to a 2010 study. The URC expended more than $1.48 billion in Research and Development (R&D) in FY08 and was one of seven innovation clusters in six U.S. states that together accounted for 22 percent of R&D investments made by all U.S. higher education institutions.

MSU provides world-class graduate and undergraduate education and is uniquely positioned to foster emerging bioeconomy and alternative energy research in the agricultural and manufacturing sectors of the economy. MSU is prepared to meet society's expectations for a global university, helping to build the local and national economy with breakthrough discoveries and new knowledge with worldwide impact. Through partnerships with leaders in Michigan and the nation and private sector collaborations, MSU is working to find solutions for the key problems facing society and serve as a critical conduit to sustaining Michigan's new economic model.

Increasingly severe economic circumstances and current fiscal realities demand our continued attention. In the face of significantly reduced funding and increasing expenses, we must focus carefully on our priorities and modify our activities, attitudes, and culture to continue to constrain expenditures.

We are changing the way we work but not the quality of the work we do for our students and others in communities close to home and around the world. This kind of transformational change is complex but necessary to preserve the quality of our academic programs over the long term as we continue to recruit highly talented students and faculty.

MSU requests recurring appropriations support for the general fund, the Michigan Agricultural Experiment Station (MAES), and MSU Extension (MSUE) sufficient to sustain FY10 programming levels and invest in Michigan's economic future.

"Michigan State is approaching the most serious financial crisis in decades in a refreshingly different way – comprehensively, collaboratively, publicly and head-on."
—Daniel Howes, *Detroit News* columnist, "MSU sets example in how to lead"

Principles for shaping the future

The task before MSU is to evaluate everything it does, not from the perspective of what can be cut but from the perspective of what the university must do. We must shape our activities to support our priorities and our existing strategic commitments, which are

- hold constant to our core values and identity;
- base priorities on anticipated societal needs, significant intellectual issues, and academic strengths;
- build upon MSU's experience and reputation as an international university;
- remain competitive on key reputational measures; and
- maintain or attain productivity measures comparable to or better than peers.

MSU funding

In order to arrive at a stable, predictable approach to funding, it is essential to recognize the differential costs associated with world-ranked instruction and research missions. State funding also should consider the total number in the graduate/undergraduate mix of students served and emphasize graduation outcomes.

In the percent change in operating expenditure support for higher education, Michigan ranked third to last among all 50 states for the five-year period ending in 2010, with an actual 2.2 percent decline in overall support. Michigan appropriations lag comparison states such as California, New York, and North Carolina, many by a considerable margin.

MSU requests recurring appropriations support for the general fund, MAES, and MSUE sufficient to sustain FY10 programming levels and invest in Michigan's economic future. More than ever, it is essential that every available dollar work on behalf of the people of Michigan in ways that will bring the greatest value and return, strengthen communities, fuel the economy, and provide all citizens with a better quality of life.

Faculty and academic programs at MSU benefited Michigan by receiving more than $495 million in external funding during FY10, with about 60 percent of that designated for research. Overall research funding for FY10 increased by more than 19 percent and research funded by federal agencies increased by almost 24 percent from the prior fiscal year.

The National Superconducting Cyclotron Laboratory is the leading rare isotope research facility in the United States and received $31.9 million during FY10 in continuing support of its research programs. MSU moved to the No. 1 ranking for nuclear physics graduate programs in the nation in FY10, surpassing MIT.

During FY10, MSU was awarded a $25 million grant from the National Science Foundation to establish one of five BEACON—Bio/computational Evolution in Action CONsortium—centers, bringing together scientists from across the nation to study evolution in action in both natural and virtual settings. It will serve as a resource for academia and industry, performing basic research while helping create new technologies to solve real-world problems ranging from the development of safer, more efficient cars to systems that detect computer intrusions.

MAES scientists will lead a four-year, $14.4 million research project—funded by the largest grant ever awarded by the U.S. Department of Agriculture's Specialty Crop Research Initiative—to combine emerging DNA sequence and research findings to improve the quality of apples, peaches, cherries, and strawberries. The project involves scientists from 11 U.S. institutions, including several land-grant universities, and six international partners.

DOE selected MSU to lead a new $12.5 million Energy Frontier Research Center, one of 46 to be established nationwide. This project is a large, concerted effort to advance the scientific understanding of the thermoelectric energy conversion process, which could lead to more efficient use of energy resources.

The university is also a key player in the development of Michigan's health care and life science sector. MSU is involved in partnerships with dozens of hospitals to train physicians, while bringing federal graduate medical education funding into those communities. The College of Human Medicine has expanded into Grand Rapids and Traverse City; the College of Osteopathic Medicine is expanding at two locations—Detroit and Macomb County.

The Product Center at MSU helps Michigan entrepreneurs develop and commercialize high-value, consumer-responsive products and businesses in the agriculture, natural resources, and bioeconomy sectors. Since it began in 2004, the Product Center has provided a wide range of venture development services to more than 2,100 clients. It has assisted in the formation of more than 800 ventures for new and existing firms, leading to the realized launch or expansion of 152 businesses across Michigan that generated nearly $300 million in annual sales, more than $200 million in investment in Michigan, and the creation/retention of nearly 1,100 jobs.

MSU is accountable to Michigan citizens. It has the highest number of in-state students among Michigan public universities. Michigan is always the first beneficiary of MSU's graduates as it delivers high-quality academic programs and global networks with Michigan applications.

Financial aid: assuring opportunity

MSU is committed to assuring opportunity to higher education for Michigan students. Nearly 84 percent of undergraduate students and 77 percent of all students come from Michigan's 83 counties. For FY11, MSU continued to increase financial aid at a rate greater than increases to tuition with approximately $93.4 million budgeted in financial aid programs, representing a total increase of more than 13 percent.

In FY09, 74 percent of all MSU students received some form of financial aid and 24 percent of undergraduate students received a Pell Grant. The Spartan Advantage program provides grants and work study to MSU's neediest students, relieving them of the cost of debt to finance their education. Despite rising costs, MSU has maintained its share of Pell Grant recipients while increasing academic quality and is committed to continuing its work with students in the economic tier just above Pell Grant eligibility who otherwise might not qualify for adequate aid.

MSU's six-year graduation rate for the class of 2009 was 77 percent, which is 9 percentage points higher than the rate predicted by *U.S. News & World Report* based on incoming student characteristics. MSU's plus-9 rate is the highest in the state and third in the Big Ten, exemplifying MSU's willingness to take risks when investing in student potential. Moreover, it is a measure of quality that demonstrates how well MSU is using its educational resources to graduate students, even in difficult budgetary times.

Michigan Agricultural Experiment Station and MSU Extension

As Michigan's only land-grant university, MSU has a programmatic presence in every county and community in the state. The yearly economic impact of agribusiness exceeds $71 billion and is a force for economic stability in Michigan. With agribusiness among the fastest-growing and largest sectors in the state's economy, MSU, in partnership with MAES and MSUE, contributes to Michigan's economy in numerous ways with significant research, educational programs, and a community presence to boost economic development in key sectors: agriculture, new economy, health care, and education. Therefore, it is essential that full recurring support be provided to both MAES and MSUE.

MSUE is focusing on four statewide program areas, each represented by a new institute:

- Greening Michigan: Leveraging Natural and Human Assets for Prosperity
- Enhancing Michigan's First Green Industry: Agriculture and Agribusiness
- Preparing Michigan's Children and Youth for the Future
- Improving the Health and Nutrition of Michigan Residents

MAES is focusing on the following research areas:

- Food and health
- Environmental stewardship and natural resource policy and management
- Enhancing profitability in agriculture and natural resources
- Securing food and fiber systems
- Families and community vitality

In an era of significantly reduced State funding and increasing expenses, MSU is seeking to change how it works while holding true to core values and commitments. This process is aimed at building value and ensuring quality. It seeks to build a new model that will transform the way we work on behalf of our students, stakeholders, and the communities we serve, both locally and globally, to shape a shared future of sustainable prosperity.

Facility for Rare Isotope Beams

MSU continues working with the U.S. Department of Energy (DOE) developing the Facility for Rare Isotope Beams (FRIB) and recently received approval to enter the next stage of the DOE agreement and proceed with the preliminary design at an anticipated cost of $55 million. The centerpiece of the new user facility will be a superconducting linear accelerator that will increase dramatically the reach of rare isotope research in the United States. The accelerator will produce isotopes that normally exist only in the most extreme environments in the universe and will expand the usefulness of isotopes in a broad range of applications from modeling stars to understanding the workings of nanoscale electronic devices.

FRIB is an important project for American science and the state of Michigan that not only will keep MSU on the cutting edge of nuclear science but will ensure the training of the nuclear scientists of tomorrow while bolstering the economies of mid-Michigan and the entire state. FRIB currently is slated to go online in 2017, serve 1,000 users, and cost more than $600 million to design and build. It is projected to create hundreds of jobs in mid-Michigan while bringing in more than $1 billion of economic activity to Michigan in the next 20 years. The project was recently recognized as one of the five most important economic development projects in Michigan. MSU looks forward to continuing its partnership with the State of Michigan to assure the successful completion of this project.

Capital outlay

The requests recognize that capital funding has not been provided by the State for a major MSU capital outlay project in more than a decade. The requests support programs that have strong national reputations, expanding research bases, and high enrollment demand that will sustain the university and its contributions to Michigan. Funding of these requests will provide economic development in the state, now and in the long term.

Renovations and additions

Requests for renovations and/or additions address extensive programmatic and maintenance improvements required by buildings previously funded by the State. Renovations may be needed to the configuration of the space in order to support the work of the programs housed in those facilities, upgrades to building systems, and provisions for barrier-free access. In other cases, due to program requirements, condition, age, and long-term value, entire renovation of a building is warranted.

Requests for major renovations and/or additions include the Plant Sciences/Engineering Bioeconomy, Biological Sciences, and Music facilities.

New construction

New construction is needed to support high-priority programs in the sciences and academic/administrative technology. Facilities are needed to support current and future programmatic initiatives and economic development of Michigan, now and in the long term.

Requests for new construction include an Interdisciplinary Science and Technology Building, Biological Safety Level 3 Containment Laboratories, and a Data Center.

Major systems replacement

Current forecasts anticipate general fund facility and infrastructure needs of approximately $108 million over the next five years. In view of the extensive facility needs it faces, MSU has had to draw upon an increasing amount of internal university resources to address the most critical facility maintenance and programmatic requirements. The ability to continue the trend of self-funding these capital improvements is not sustainable without impact on other programs.

The university seeks funding for more targeted and specific building systems maintenance and instructional space facility upgrades. Examples of systems in need of repair or replacement include roofing, windows, electrical, mechanical, chiller, refrigeration, steam, fire, security, and barrier-free access. Instructional space upgrades may include furniture, ceiling, lighting, painting, power, data and technology support, and lab benches and fume hoods.

Conclusion: shaping the future

MSU, among the best research universities in the world, is uniquely positioned to contribute to critical challenges facing Michigan and the nation. It is a site for creativity, invention, and discovery, all contributing to a long-standing tradition of innovation and a diverse range of partnerships that align resources to produce the greatest impact for the greatest benefit.

State support remains critical to making this happen. MSU requests recurring appropriations support for the general fund, MAES, and MSUE sufficient to sustain FY10 programming levels and invest in Michigan's economic future.

During times of increasingly strained financial resources, MSU continues to reinvest in the academic core of the university while ensuring that its strategic imperatives are integrated into the broader academic and financial decisions. MSU applies technology for greater effectiveness in instruction and administration, emphasizes cost-saving measures, and manages its physical plant wisely.

MSU will continue to transform its activities in ways that create greater efficiency and effectiveness as it builds a new model to achieve its goals while making sure the transformation does not come at the expenses of its core values—quality, inclusion, and connectivity. It will continue to recruit highly talented students and faculty, concentrate on research and development activities, and work to facilitate public and private sector collaborations and an efficient system to transfer technology from the classroom to industry.

MSU continues to be a leader as a global agenda for American higher education takes shape, building on its extraordinary foundation to look across disciplines and boundaries to help solve problems and prepare students to compete globally in a knowledge-based economy.

Michigan State University is committed to Michigan businesses, students, and families and continues to be a critical conduit to sustaining Michigan's reinvention and economic transformation.

MSU Benchmarks & Operating Accomplishments Attachment A

MSU systematically reviews the outcome of numerous benchmarks and related data. Key institutional metrics are noted below. Additional information may be found in MSU's Data Digest and Trends & Benchmarks documents.

- Operates among the **lowest** total tuition and fees and appropriation per student in the Big Ten (currently next to last)
- Current student faculty ratio: 16-1, approximates the **Big Ten average**
- **1st or 2nd** in the Big Ten for proportion of expenses related to instruction, research, and public service
- **5th** in the Big Ten for total faculty compensation and averages **5th** in the Big Ten for total graduate assistant compensation
- Student Accomplishments:
  - Entering class GPA of 3.6 (up 3.7 percent over ten years)
  - Entering class GRE score of 25.4 (up 6.3 percent over ten years)
  - Persistence between freshmen and sophomore years of 91 percent (up 4 percentage points over ten years)
  - Graduation rate of 77 percent (up 13 percentage points over ten years)
- **Second to last** in the Big Ten for number of students per employee
- **Top 6 percentile** nationally for endowment performance over 10 years
- **Lowest** total unit cost for energy in the Big Ten
- **Most efficient** in the Big Ten for custodial, maintenance, and grounds staffing

The following represent key operating accomplishments that have enabled MSU to constrain costs, and serve students and Michigan's citizens. Detailed materials are available for each of these initiatives, upon request. For more MSU Budget related information: http://www.budget.msu.edu/

- Reduced health care costs by 10 percent; imposed a 5 percent cap on annual funded increases
- Discontinued funded post retirement health care for all new employees
- Initiated comprehensive review of campus programs, 41 programs proposed for discontinuation; not all will be discontinued
- Maintained the long-term economic mix of our undergraduate population through financial aid, despite economic circumstances
- Highlighted student and faculty focus in the area of entrepreneurship and the new economy

- Continued emphasis on programs contributing to the State's economy

    - Restructured MSUE and MAES

      http://www.maes.msu.edu/

      http://www.msue.msu.edu/

    - Initiated MSU Technologies, MSU Business Connect, MSU Product Center, and MSU BioEconomy Network

      http://www.technologies.msu.edu/

      http://www.businessconnect.msu.edu/

      http://www.aec.msu.edu/product/index.htm

      http://www.vprgs.msu.edu/node/758

    - Created and sustained Prima Civitas Foundation

      http://primacivitas.org/

    - Prepared to announce MSU Create