

Board of Regents
Budget Committee Meeting
May 19, 2004
10:00 A.M.
Great Falls College of Technology

1. FY06-07 Present Law Base Adjustments
2. FY06-07 Proposed Budget Initiatives
3. Metrics for Budget Reporting

Requested Present Law Base Adjustments Montana University System

System Requests:

Resident Enrollment Growth – MUS

MUS Resident Enrollment Growth Funding Level - \$1,888/FTE

	FY04	FY06	FY07	Growth	
	Budgeted	Projected	Projected	FY04-FY06	FY04-FY07
FTE	26866	27881	28533	1015	1667
Funding				\$1,916,320	\$3,147,296

Biennial Total	\$5,063,616
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Resident Enrollment Growth – Montana Community Colleges

Community College Resident Enrollment Growth Funding Level - \$3,024/FTE

	FY04	FY06	FY07	Growth	
	Budgeted	Projected	Projected	FY04-FY06	FY04-FY07
FTE - DCC	419	415	425	-4	6
FTE - MCC	518	566	600	48	82
FTE - FVCC	1385	1735	1822	350	437
Total Resident FTE	2322	2716	2847	394	525
Funding				\$1,191,456	\$1,587,600

Biennial Total	\$2,779,056
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Fund Authorized Level of Students in WWAMI, WICHE, and MN

	FY04	FY06	FY07	Present Law Base Adj.	
	Actual	Projected	Projected	FY06	FY07
WICHE Dues	\$103,000	\$112,300	\$116,800	\$9,300	\$13,800
WICHE Support	\$1,619,800	\$1,770,434	\$1,826,266	\$150,634	\$206,466
WWAMI	\$2,791,866	\$3,214,000	\$3,310,400	\$422,134	\$518,534
Minnesota Dental	\$132,000	\$156,000	\$159,200	\$24,000	\$27,200
TOTAL	\$4,646,666	\$5,252,734	\$5,412,666	\$606,068	\$766,000

Biennial Total	\$1,372,068
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Utility Increases/Library Materials Increases/Fuel Oil Increases

Present law base (PLB) increases for these categories of expenditure are normally made through the application of an inflation factors applied to the FY04 base for all agencies rather than through individual agency requests. Some of the attached agencies that have significant travel as part of their mission have requested present law base adjustments for gasoline. If a general inflation factor is applied, these PLB requests will not be approved. The campus staff with expertise in utility purchases and utility markets will be meeting with OBPP and the LFD to share their insight and projections regarding projected utility expenditures. In some cases units have submitted present law base adjustments for utilities pending the outcome of these discussions. Those present law base adjustments have not been included in this document. The MSU and UM libraries are collaborating with the State Library and the State Law Library to make recommendations to OBPP and the LFD regarding the needed PLB adjustments required to maintain existing resources. The units have submitted present law base adjustments for library costs pending the outcome of this request. Those present law base adjustments have not been included in this document.

Increase in Scholarships and Fellowships

MUS Resident Projected Increases in Scholarships and Fellowships

Unit	FY04 Budgeted Resident Enrollment	FY06 Budgeted Resident Enrollment	FY07 Budgeted Resident Enrollment	FY04 Budgeted Resident Waivers	FY04-05 Average Resident Tuition Increase	FY05-06 Estimated Resident Tuition Increase	FY06-07 Estimated Resident Tuition Increase	FY06 Estimated Resident Tuition Waivers	FY07 Estimated Resident Tuition Waivers
MSU-Bozeman	8,140	8,253	8,422	3,909,726	12.2%	6.0%	6.0%	4,685,449	5,024,105
MSU-Billings	3,802	4,240	4,483	1,082,811	12.0%	6.0%	6.0%	1,424,913	1,583,182
MSU-Northern	1,377	1,355	1,369	811,316	12.0%	6.0%	6.0%	942,057	1,000,187
Great Falls COT	1,139	1,234	1,332	138,500	12.0%	6.0%	6.0%	177,061	200,841
UM-Missoula	8,959	9,326	9,413	3,800,309	8.5%	6.0%	6.0%	4,529,604	4,811,433
MTUM	1,757	1,840	1,861	920,895	12.0%	6.0%	6.0%	1,137,989	1,209,502
UM-Western	856	860	865	351,701	8.5%	6.0%	6.0%	404,579	428,256
Helena COT	734	773	788	85,000	6.0%	6.0%	6.0%	100,258	107,679
	26,764	27,881	28,533	11,100,258				13,401,912	14,365,185

Biennial Increase	\$5,566,582
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Individual Campus/Agency Requests for Present Law Base Adjustments:

Montana State University - Bozeman	
ITC Software License Support Inflation Adjustment	\$132,455
Local Utility Inflation (Water, Sewer, Trash, Storm Water)	\$205,908
Off Campus Rent Adjustments	\$178,546
Inflation Adjustment for Building and Infrastructure Repair	\$593,918
Montana State University – Billings	
Internal IT Service Recharges	\$113,754
Internal Maintenance Service Recharges	\$ 37,262
Elevator Contracts – Rate Increase	\$ 10,000
Local Utilities (Water and Sewer)	\$ 3,662
Local Utilities (Garbage)	\$ 350
Montana State University – Northern	
Inflation Adjustment for Building and Infrastructure Repair	\$ 25,771
Increase in O&M for the new Applied Technology Bldg.	\$136,970
Local Utility Inflation (Water, Sewer, Trash, Storm Water)	\$ 4,426
Great Falls COT	
Local Utility Inflation (Water, Sewer, Trash, Storm Water)	\$ 9,493
Montana Agricultural Experiment Stations	
Payment of Overhead Costs to MSU-Bozeman	\$337,672
Continue Bio-based Products	\$400,000
Montana Extension Service	
Payment of Overhead Costs to MSU-Bozeman	\$186,213
Fire Services Training School	
Rental Space for FSTS	\$ 58,241
Gasoline Price Increases	\$ 8,424
Payment of Overhead Costs to MSU-Bozeman	\$ 1,015
The University of Montana - Missoula	
Fund O&M and Utility Costs (Chem, SC, HS, McGill, Journalism)	\$481,149
IT License and Maintenance Cost Increases	\$147,437
Local Utility Inflation (Water, Sewer, Trash, Storm Water)	\$246,600
The University of Montana – Western	
IT License and Maintenance Cost Increases	\$ 12,092
Security Contract Increase	\$ 15,949
Montana Tech of The University of Montana	
Increase Motor Pool Charges – Gasoline	\$ 7,080
IT License and Maintenance Cost Increases	\$ 54,464
Increase in Bad Debt	\$140,000
Bureau of Mines	
Increase Motor Pool Charges – Gasoline	\$ 7,080

Montana University System Proposed Budget Initiatives for the FY06-07 Biennium

Attached are summaries of budget initiative for the FY06-07 biennium that have been proposed or submitted to the Board of Regents for consideration. They include:

1. Train Workers – and Create Jobs - The University of Montana
2. Protect Montana’s Facilities – and Create Jobs - The University of Montana
3. Protect one of Montana’s Largest Industries – and Create Jobs – The University of Montana
4. Establish the Montana Health Sciences Center in Butte – MTUM
5. Establish the Institute for Biomedical Engineering and Research – MTUM
6. Provide Transition Funding for the Montana Tech Economic Development Resource Center – MTUM
7. Partnering with the K-12 Community to Address Issues in the “No Child Left Behind Act” – Montana State University
8. Increasing the Supply of Health Care Workers to Strengthen Communities and Improve Health Care – Montana State University
9. Increasing Agricultural Profitability and Sustainability Extension Cropping Systems Specialist – ES
10. Increasing Agricultural Profitability and Sustainability Livestock Specialist – ES
11. Implement the Fire Training Advisory Council Training Plan – Add One Trainer - FSTS
12. Integrated Weed Management and Biotechnology – MAES
13. Access to Higher Education through Support of Non-Beneficiary Students at Tribal Colleges
14. Assuring a Quality and Competitive University System – Montana Education Association-Montana Federation of Teachers
15. Providing Qualified Teachers to Montana Schools – Montana Education Association-Montana Federation of Teachers

Montana University System Proposed Budget Initiatives for the FY06-07 Biennium

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The Montana University System
Strengthening the Montana Economy

TRAIN WORKERS - AND CREATE JOBS

State Need:

- Create a responsive mechanism to assist small businesses and train Montanans for good paying jobs in skilled crafts, technical, and professional careers.

Current Problem:

- Montana’s unemployment rate currently hovers around 5%.
- Only 54% of Montana’s high school graduates attend college, compared to 62% nationally.
- Each year over 5,000 Montana high school graduates attempt to enter the workforce with no education beyond high school and no marketable skills training.
- Roughly 42,000 Montana workers currently earn wages at or below the poverty line.

Market Reality:

- 80% of the fastest-growing jobs in the country require education beyond high school.
- The average annual income of an employee with a two-year degree is roughly \$5,700 higher than the income of an employee with a high school diploma. With a four-year degree, the yearly income difference rises to about \$17,700. These income gains are widening as employers place greater value on the skills and education that drive higher productivity.
- Research confirms that, in today’s world, the most important business location consideration is access to a skilled and educated workforce.

Proposed Solution: The Career Academy and Business Extension Service

- Create an entity to assess local business needs for training and other technical assistance.
- Provide a bridge between high school students or unemployed Montanans and a broad array of good paying jobs through relationships and agreements with trade-based organizations, high schools, businesses, and local governments.
- Guide students toward certification and licensure in their specific areas of interest, such as
 - journeyman carpenters, welders, plumbers, and electricians
 - LPNs, surgical technicians, radiological technicians, and other allied health care workers

Required Investment:

- \$1,200,000 from the State
- \$400,000 biennial investment from industry partners
- \$1,200,000 biennial investment from students and their families (tuition)

Return on Investment:

- Stronger business environment for Montana, and more – and better paying – jobs.
- Meeting local business needs.
- Creating a viable career potential for young Montanans who otherwise will begin their adult lives at or near the poverty line.

Selected Examples of Returns:

- Jobs in the targeted sectors command roughly twice the salary levels of unskilled positions at career entry, with increased potential earnings at 3-4 times those of high school graduates without post-secondary training.
- Adding 150 skilled workers to the Montana economy each year, at an average starting salary in the low-to-mid-thirty thousand dollar range.
- Increased entering salaries of participants alone could return more than \$2 million per year to the Montana economy within the first biennium – a return rate of greater than 3:1

The Montana University System
Strengthening the Montana Economy

PROTECT MONTANA’S FACILITIES - AND CREATE JOBS

State Need:

- State facilities across Montana are aging
- There is a significant, growing backlog of maintenance and replacement needs for these facilities

Market Reality:

- Facilities owned by the State of Montana have a replacement value in excess of \$1.5 billion, two-thirds of which are in Higher Education.

Current Problem:

- These facilities wear out at a predictable rate – approximately 1-2% of replacement value annually – resulting in capital renewal needs of \$15-30 million per year - \$10 million in Higher Education alone.
- Lack of appropriate maintenance shortens the useful life of buildings by as much as 25%.
- When allowed to deteriorate, buildings become less useful and less energy efficient over time.
- Delay will only increase the cost of maintenance when finally accomplished.

Proposed Solution:

- Increase the investment in facilities by at least \$12 million per year to begin to address deferred maintenance backlog and ongoing infrastructure needs of the MUS.

Required Investment:

- \$24 million per biennium from
 - \$14 million - the State
 - \$1 million - Federal government (indirect cost, for research facilities)
 - \$4.5 million Industry partners and other private donations
 - \$4.5 million - Students (tuition)

Return on Investment:

- The State of Montana will have a reliable source of funding to reverse the deterioration of MUS buildings.
- With proper maintenance, the State can avoid or delay replacing buildings.

Selected Examples of Return:

- Monies spent to address building maintenance and replacement will be paid to Montana contractors, supporting approximately 250 construction jobs each year at an average wage of around \$40,000 – a total of at least \$10 million dollars in jobs.
- Timely maintenance can avoid additional costs of at least \$400 thousand per year.
- Improve efficiency and usefulness - producing at least \$400,000 per year in energy savings alone.
- Preserving and enhancing the attractiveness of MUS campus environments will improve the retention of current students as well as aiding the recruitment of prospective students. A retention increase of only 2% will yield \$2.3 million in non-resident educational expenditures.

#2

The University of Montana
Strengthening the Montana Economy

PROTECT ONE OF MONTANA'S LARGEST INDUSTRIES – AND CREATE JOBS

State Need:

- Protect the investment in one of Montana's largest and highest returning industries.

Market Reality:

- The Montana University System is the largest single business entity in the State, employing approximately 8,200 employees (plus another 4,000 student employees), and generating more than \$750 million in annual revenue -- on a State investment of \$135 million.
- The University system produces more than \$500 million per year in economic impact from direct educational expenditures of its students
 - \$140 million comes in direct educational expenditures from enrolled non-resident students, excluding expenditures not related to their education.
 - \$367 million comes in direct educational expenditures of enrolled resident students.
- In addition, MUS brings to the State more than \$150 million per year in sponsored research and private donations – and \$40 million from out-of-state visitors

Current Problem:

- This vital industry is threatened by
 - A 20 percent decline in non-resident enrollments over the past six years, with a loss of nearly \$30 million per year to Montana's economy.
 - Tuition increases that interfere with access for Montana residents because of low average family incomes in the State.

Proposed Solution:

- Enhance grant aid/loan funds for resident students by \$1 million for the biennium.
- Create a non-resident recruitment program "Destination Montana Education" with \$2 million for the biennium, primarily for waivers and/or scholarships.

Required Investment:

- \$3 million per biennium from:
 - \$2,400,000 - the State
 - \$600,000 - Industry partners and other private donations

Return on Investment:

- Increase investment in - and access for - Montanans
- Increase the number of enrolled resident students by 300 per year.
- Increase the number of enrolled nonresident students by 350 per year.

Selected examples of Returns:

- A conservatively estimated \$25 million biennial return on the investment – a return rate of greater than 8:1.
- An educated workforce responsive to the needs of Montana government, business, and industry
 - More than 6700 students graduate from MUS campuses each year
 - A single year's graduates will have increased earnings of \$105 million per year, as a result of their post-secondary education.

The Montana University System A Budget Proposal for the FY-06/07 Biennium

WORKFORCE AND ECONOMIC DEVELOPMENT

State Need: Establish the Montana Health Sciences Center in Butte

Current Problem:

Over the past several years, a number of individuals and business entities have been actively engaged in planning or developing companies in Butte that will be able to respond to the explosive growth occurring in various sectors of the health care industry. Other established organizations, like St. James Healthcare, are looking for opportunities to contribute to this expanding market. Montana Tech has expanded its health science offerings to include a Bachelors degree in Nursing as well as the nation's first undergraduate degree in Health Care Informatics.

Proposal:

Establish the Health Sciences Center in Butte. Within the Montana Health Sciences Center, three "Centers of Excellence" would be established:

- The National Center for Health Care Informatics, established in Butte in 2000 through an initial federal appropriation of \$400,000;
- The Environmental Health and Medicine Center is a new effort to develop the unique opportunities that exist in the area of environmental medicine. Currently very few environmental medicine centers exist in the United States with most being located on the East Coast.
- Rural Health Education Center. Existing healthcare manpower shortages will continue to play an integral role in shaping the future of healthcare education programs. Montana Tech's nursing program has undergone significant growth both in students and staffing over the past five years. Currently, Montana Tech has approximately 350 nursing students. Limited space is available at Montana Tech for the instructional and faculty offices required for this program.
- In addition the Health Sciences Center will establish a division for product development and testing to support new and expanding medical equipment providers located in southwest Montana.

Costs:

Construction costs for the facility are estimated at \$20,000,000. State partnership sought at \$5,000,000.

Benefits:

The Health Sciences Center would provide a platform to bring together numerous local healthcare-related businesses to develop commercial opportunities in multiple facets of the healthcare industry.

Value Added:

This facility will provide a synergistic environment that will result in a more integrated approach to solving healthcare-related issues and will include a capability for health care product development and usability testing of new products.

The Montana University System A Budget Proposal for the FY-06/07 Biennium

WORKFORCE AND ECONOMIC DEVELOPMENT

State Need: Establish the *Institute for Biomedical Engineering and Research*

Current Problem:

The growing crisis in healthcare costs, the predicted shortfall of health care professionals, and the spectacular development of diagnostic and clinic techniques will cause the health care industry to develop more sophisticated engineered solutions to medical problems.

Proposal:

The Institute for Biomedical Engineering and Research (IBER) will build on working collaborations with the International Heart Institute in Missoula and Big Sky Neuroscience and Spine in Butte. The IBER will expand these existing thrust areas to include applications of biomaterials, development and testing of noninvasive diagnostic techniques, and computer modeling of the electrical, mechanical and fluid transport systems of the human body.

- This initiative would establish a formal biomedical engineering research program at Montana Tech in collaboration with medical facilities and private industry in Montana.
- The Institute for Biomedical Engineering and Research will provide a venue for medical doctors and health professionals to work with Montana Tech engineers and students to develop innovative processes and technologies to improve the quality of life and health care at an affordable cost.
- The Institute will include membership from the private sector, regional healthcare facilities and area Local Development Corporations.

Costs:

The funding required to establish the Institute would be \$3,000,000

Benefits:

The results of this collaborative research in biomedical engineering will impact the national medical workforce and the economy of the region.

- Students will actively participate in medical device research and will be encouraged to continue their education in this field of current underemployment.
- The regional economy will benefit as the manufacture of these new medical devices begins. It is expected that this high value technology development will bring high paying jobs and spin off small businesses and companies that will improve and sustain a strong regional and state economy

Value Added:

- Health care is the largest industry in the United States. Establishing the Institute for Biomedical Engineering and Research will enhance Montana's competitiveness in the growing field of medical device engineering and application.
- The institute will support students, recruit research faculty and host visiting medical researchers.
- Corporate partnerships and competitive grants will be used to sustain the center after this initial start up phase.

The Montana University System A Budget Proposal for the FY-06/07 Biennium

WORKFORCE AND ECONOMIC DEVELOPMENT

State Need: Provide transition funding for the Montana Tech Economic Development Resource Center

Current Problem:

The economy of Montana, and southwest Montana in particular, is experiencing an extreme economic slowdown as a result of the reduction of job opportunities in the resource industries such as logging and mining. Local communities and the State government continue to increase their efforts to grow existing businesses and to further develop opportunities for new investments in the region.

Proposal:

The Montana Tech Economic Development Resource Center is the focal point within Montana Tech to coordinate and facilitate the numerous economic resources that are available within the University with local economic development agencies. The Center's purpose is to make these resources available to local economic development agencies and new and expanding companies in Southwest Montana.

Specific goals include:

- Establish and support working relationships between Montana Tech and the existing economic development agencies and businesses in Southwest Montana.
- Develop partnerships between regional business and Montana Tech to insure the orderly flow of intellectual property from the University into the marketplace.
- Provide liaison between start up businesses, the investment community, and/or government agencies to identify appropriate funding opportunities.
- Encourage public service through faculty and staff participation on regional economic development boards and forums.
- Conduct and subsidize business management seminars for small businesses in southwest Montana.

Costs:

This proposal is for \$100,000

- Current funding was appropriated in FY 2002 through the Department of Commerce (H. Rept. 107-278) in the amount of \$300,000. This funding will be exhausted in June of 2004.
- This proposal is for \$100,000 in bridging funds to support of the Economic Development Resource Center on the campus of Montana Tech as we continue to build a self sustained economic model.

Benefits:

- This program allows Montana Tech to assist in the economic development efforts currently being pursued by local and state agencies in southwest Montana.
- The Center will continue to help in the recruitment of business to Southwest Montana by its proactive brokering of Montana Tech's physical and intellectual resources to new and expanding regional businesses
- The Center serves as the Technology Transfer agent for Montana Tech.
- The Center encourages and develops intellectual properties developed by the faculty and staff of Montana Tech for transfer to regional businesses

Value Added:

This request will augment funds received from the US Department of Commerce and will ensure the continued operation of this valuable and timely effort on the Montana Tech campus.

#2

Partnering with the K-12 Community to Address Issues In the “No Child Left Behind Act”

State Need:

- Montana’s K-12 schools face serious challenges as they make the changes necessary to respond to local, state and federal expectations in a resource-constrained environment.
- Federally imposed requirements regarding the specific preparation of K-12 teachers require Montana to develop creative solutions to meet these requirements and maintain maximum possible local autonomy.

Market Reality:

- In Montana, there exists shortages of highly qualified teachers and administrators
- Teachers from rural communities who teach in broad field areas, such as science, may be forced out of those communities to larger districts where they can teach several sections in an area for which they have specific preparation.

Current Problem:

- The existing teacher workforce needs access to the programs that will provide the necessary spanning of the gap that exists between their current preparation and the requirements of the “No Child Left Behind Act”
- Present campus resources do not allow for the concerted “SWAT Team” approach that will be necessary to meet this statewide need.

Proposed Solution:

- **MSU-Billings** will expand its Internship and Endorsement Project to help practicing teachers and will provide a masters degree leading to Highly Qualified Teacher status for middle school teachers with elementary certification, but without a content-area major.
- **MSU-Northern** will partner with Hi-Line Tribal colleges to prepare more American Indians for teaching through Bachelor’s degree programs in Elementary Education and will assist practicing teachers by delivering cohort based masters degrees to improve effectiveness and pay scales.
- **MSU-Great Falls COT** will employ appropriately qualified teachers to expand its dual-enrollment programs to provide highly capable students the chance to start college or a high-skills career. In addition the COT will further develop its WebWriters program to provide an on-line system to giving students practice, evaluation and feedback on composition skills.

Required Investment:

- Investments in these targeted areas will total **\$580,000**
 - **MSU-Billings** - \$140,000
 - **MSU-Northern** - \$315,000

- **MSU-Great Falls COT - \$125,000**

Return on Investment:

- Compliance with NCLB provisions, ensuring continued federal funding for K-12 schools; increased supply of appropriately qualified teachers, especially in rural and reservation schools; more American Indian teachers.
- Educational, professional, and salary incentives for teachers and administrators to stay in Montana.
- Improvements in writing skills and in writing instruction; more opportunities for high school students to challenge themselves academically and save money on postsecondary education.

Selected Examples of Return:

- Lower teacher recruitment costs will result in many smaller school districts if practicing teachers can easily meet NCLB requirements
- More natural progression into administrative positions can result for teachers if course work for administrative endorsements can be made convenient and predictable.
- Improved education will result in Reservation schools if the number of Indian teachers can be increased.
- Time to degree for students can be shortened for talented students if dual enrollment programs can be modeled by MUS units and K-12 districts.

Increasing the Supply of Health Care Workers to Strengthen Communities and Improve Health Care

State Need:

- The decreasing ability of rural communities and health care facilities to attract and retain health care workers has threatened and will continue to threaten the viability of rural health care facilities.
- Loss of these important community organizations, which provide many of the best paying jobs in their counties, has a negative multiplier effect on the jobs, income, and survival of the communities in which they exist.

Market Reality:

- The Governor's Health Care Task Force has identified shortages in the availability of trained health care workers, particularly east of the divide and most critically in rural areas.
- The paucity of health care workers, especially RN nurses, forces rural health providers to hire agency or "traveling" nurses at rates that are 2 ½ times the cost of a normally hired nursing FTE.
- New Programs are too costly to create from existing resources.

Current Problem:

- All the citizens willing and able to make a contribution to rural health care are not able to come to our campuses.
- All areas of health care education are very costly and supervision-intensive.

Proposed Solution:

- An infusion of new money, specifically directed toward rural delivery of health care education, can produce significant financial and cultural returns by enlarging the pipeline of workers for rural facilities
- The Montana University System is in a position to assist communities in remaining viable by making education and training in the health professions more accessible to an existing pool of talented, but place-bound citizens in rural areas.

Required Investment:

- For a biennial infusion of **\$1 million**, the Governor and the Montana Legislature can make a targeted investment in the health and future of the state's rural communities. This investment will result in the employment of health care workers, locally recruited and trained.
 - **\$675,000** for education and training programs
 - **\$325,000** for organizational enhancements to ensure lasting statewide impacts

Return on Investment:

- Significant financial and cultural returns by enlarging the pipeline of workers for rural facilities and, thereby, saving those facilities money by preventing the need to hire hugely expensive temporary workers and, ultimately, strengthening those facilities and the communities in which they exist.
- Strengthening the ties between MUS units, the health care providers and Montana's rural communities.

Selected Examples of Return:

- Increased delivery of educational and public health programs, applied research and administrative expertise.
- Increased employment of Montana citizens in high paying jobs
- Savings to health care providers of, with RN nurses, up to \$40,000 per FTE
- Improved bottom line for health care facilities and the multiplier effect that has on rural communities.
- Increased personal and corporate tax yields to the State.

#2

Increasing Agricultural Profitability and Sustainability Extension Cropping Systems Specialist

State Need:

- **MSU Extension has not had a cropping systems agronomist for over ten years. This has been a result of budget constraints, rather than lack of recognized need for Montana producers.**
- **The Montana grain growers continually express concern over this and request a position to support their industry.**
- **Montana cropping systems have shifted fundamentally to no-till systems presenting new pest and soil management issues.**
- **Montana producers have an opportunity to acquire increased market share with management-intensive organic production.**
- **This Extension position is critical to reducing costly mistakes based on inexperience for new crops such as canola, mustard, sunflower, peas, lentils and chickpeas.**

Market Reality:

- **Grain production is the second largest agricultural enterprise in the state.**
- **Markets are changing with regard to consumer preference and international opportunities.**
- **Producers are venturing into production of new crops without proper Extension support from a Montana context. Borrowing information from neighboring states and provinces can have serious limitations here.**
- **Pulse crops (peas, lentils, chickpea) now receive price support under the Federal Farm Program, providing new incentives to grow these crops.**
- **New bio-based oilseed ventures in Montana require Extension support to ensure a successful production base.**
- **Federal initiatives with carbon markets promise new sources of income for Montana's no-till producers.**
- **There are many new opportunities associated with new Farm Bill Programs (EQIP, CRP, etc.) that need to be extended to Montana farmers.**

Current Problem:

- **Crop diversification in Montana lags well behind neighboring states and provinces. Diversified cropping strategies provide systems benefits and impact the bottom line through water-use-efficiency, nitrogen savings in pulse crops, nitrogen contributions to following crops, and soil carbon accumulation. There is relatively low adoption due to lack of extension presence.**
- **Basic extension needs for pulse and oilseed crop production are not being met, resulting in costly avoidable mistakes by producers.**
- **Development of agricultural industry for processing oilseed and pulse crops in Montana requires a knowledgeable production base.**

- Tillage is still the dominant method of fallowing fields. Sound alternatives to fallow are under development and need to be more thoroughly extended to Montana producers.

Proposed Solution:

- Fill Cropping Systems Specialist position to be located on MSU campus.
- Position will integrate with existing Agricultural Experiment Station and College of Agriculture faculty, including cropping systems research/on-campus teaching, weed management, and many others.
- Potential to secure partial operations funding from state and private programs including Noxious Weed Trust fund, Fertilizer Tax Committee, Wheat and Barley Committee, etc.

Required Investment:

- FY 07 - \$82,000 (salary, benefits and operations)
- Producer groups may contribute some start-up equipment like vehicle(s), farming equipment, etc.

Return on Investment:

- Oilseed and pulse crops can potentially boost farm income in Montana through marketing a more diversified basket of crops and adding value to the production system through improved water-use-efficiency, pest management, and soil nutrient cycling.
- A recent study in Saskatchewan showed return on investment for pulse crop research of greater than 30 to 1. Extension of research knowledge to producers is critical to capturing this return on investment.
- The livestock industry in Montana provides many opportunities for creating value with cereal, pulse and oilseed crops. This may be especially critical in drought-prone regions.

Selected Examples of Return:

- Basic cropping systems extension will prevent many avoidable mistakes with pulse and oilseed crop production. Each year there are numerous examples throughout Montana where producers growing a new crop lose some or all of that crop's production, costing from \$10 to \$200/acre. Common errors relate to fertility practice, improper inoculant use, seeding rate, seeding depth, seeding date, harmful herbicide residues in the soil, improper herbicide use, poor variety choices, etc. These errors are largely preventable with a Cropping Systems Extension program.
- As fuel prices increase, the price of nitrogen follows. Producers are looking at pulse crop production to reduce N fertilizer costs and to provide N benefits to wheat crops. Pulse crops can fix up to 100 lb/ac of N with a fertilizer equivalent value of \$20/ac and greater. Pulse crops commonly cycle 10 to 15 lb of N/ac to wheat crops, adding further value. Extension support is critical to managing fertility in pulse crops and in ensuring that a proper N credit is used for following crops.

Increasing Agricultural Profitability and Sustainability Livestock Specialist

State Need:

- As a result of the 2003 special session budget reduction, a livestock specialist position has been left open since early FY 03.
- The Montana livestock industry continues to place a high priority on this position, requesting that the position be refilled and located at the Ag Research Center in Miles City.

Market Reality:

- Cattle and calves account for approximately one-half of Montana's agricultural income - approximately \$1 billion dollars.
- Increased educational assistance could significantly help to further improve this industry by enhancing reproductive efficiency, food safety and animal identification of non-productive animals.

Current Problem:

The U.S. beef industry is changing rapidly – driven by consumer concerns regarding food safety and dynamic global markets. Examples follow:

- Proposed national animal identification program which will require the identification of 2 million head of Montana cattle.
- A national emphasis on determining the incidence of BSE in Montana and national beef cattle herd by implementing biosecurity programs.
- An emphasis on pre-harvest food safety by the rancher in reducing the incidence of E. coli, salmonella, campylobacter and, potentially, BSE.
- Education of Montana livestock producers in Beef Quality Assurance.
- Helping Montana producers tailor beef genetics and management to meet specific markets.
- Helping Montana producers minimize reproductive failure in the breeding cow herd.

Proposed Solution:

- Fill livestock specialist position located at Ag Research Center in Miles City, Montana.

Required Investment:

- FY 06 - \$82,000 (salary, benefits and operations)
- FY 07 - \$82,000 (salary, benefits and operations)
- The Beef Network is a partnership between the livestock industry and MSU.

Return on Investment:

- **There is the potential to improve calf weaning weights by 50 lbs. if more calves were born earlier in the calving season. This improvement is conservatively worth \$36 million dollars in additional gross revenue if calves are worth \$.90/lb. at weaning in the fall.**
- **If management programs were in place, the value of cull beef cows could be increased by \$150/head if fed to achieve 300 lbs. of additional gain before sale. These are called “white-fat” cows and are in demand for lower end steak house entrees.**
- **Appropriate winter feeding protocols have been shown to decrease feed costs by as much as \$6,000- \$20,000/ranch.**

Selected Examples of Return:

- **This is a critical position in the MSU Extension program. This is the only specialist located in eastern Montana devoted exclusively to livestock extension.**
- **Not only are educational programs necessary in livestock management for eastern Montana livestock producers, this individual also serves as a resource for USDA-ARS at Ft. Keogh, NRCS employees, Montana Stockgrowers, Farm Bureau and local county livestock committees.**
- **This position is a partnership between MSU Extension and USDA-ARS-LARRL, with the federal station contributing significant resources in support of the position.**
- **The position will be work with on-going partnerships between MSU and the livestock industry such as the Montana Beef Network.**

#2

Implementing the Fire Training Advisory Council Training Plan - Add One Trainer

State Need:

- To reduce loss of life, injury, economic and social costs arising from fires and other hazards
- To comply with OSHA mandates for training of firefighters; large fines have been imposed on fire departments not in compliance
- To provide expertise to rural firefighters to continue training required for competency
- To meet the demand for fire training due to changes in technology and high turnover rates among volunteers

Market Reality:

- Taxpayers expect immediate and professional service from community fire departments
- Fire insurance rate increases are being seen by communities because their fire departments fail to meet standards
- Project fires cost Montana taxpayers an average of 3.5 million dollars annually
 - Wedge Canyon - \$34 million
- Montana's rural nature and unpredictable climate create challenging emergency response circumstances for firefighters

Current Problem:

- With more than 10,000 firefighters serving communities, only 50% of Montana's 370 companies are currently reached with quality training
- Firefighters no longer respond to just fires; they are called upon to rescue people in all types of incidents including traffic accidents, chemical spillages, and to major incidents of terrorism and other chemical, biological, radiological or nuclear threats
- Montana's rural nature and the lack of private sector training resources combine to make the training of firefighters a necessary and critical function of government

Proposed Solution:

- The Advisory Council of the Fire Services Training School (FSTS) proposes adding a trainer, strategically located within the state to:
 - reach 63% of fire services with effective training
 - meet the growing demand for skilled responders to a variety of emergency incidents at a cost-effective level
 - significantly reduce the "windshield time" required by the other four trainers thereby converting that time to more training

Required Investment:

- FY 06 \$112,630 (Trainer, support staff, operations and vehicle)
- FY 07 \$ 78,664 (Trainer, support staff and operations)

Return on Investment:

- Economic Return on Investment
 - Reduction of loss to property, cost of insurance and liability issues
 - The quality of local fire services has a direct relationship on the cost of fire insurance; savings to rate payers outweighs the initial cost of training
 - Fire organizations, paid and volunteer, are more vulnerable than in the past to lawsuits, fines and other damages
 - An investment in training community fire services achieves reduction of loss by:
 - Improved response time

- Continued development of ability and skills
- Knowledge of new procedures and equipment
- Workforce Development Return
 - Volunteers make up 96% of community fire services; their competence is directly related to life safety and the survivability of communities, businesses and their residents
 - Good training is the most significant element in developing the competence of community emergency services; FSTS is the primary source for training at the state level
 - The number of businesses saved as a result of the ability of more competent local fire services to prevent property losses due to fire could be significant over a decade
 - The majority of trainees served by FSTS are volunteers and not compensated for their contribution to life and property safety in rural communities
 - USFA/FEMA has set firefighter safety as a priority; injuries to volunteers affect the individual and the community; the only way to assure safe operations in any aspect of fire services is training and education
- Return on Resources
 - The best use of resources is to change “windshield time” to “training time”; FSTS staff travels Montana highways in all weather, weekdays and weekends, taking training to local communities; agency staff currently log over 130,000 miles per year to serve Montana emergency services responders
 - It is important that training time is maximized as time is limited resource to volunteers
 - FSTS responds to training with a cadre of expertise relevant to an organization’s needs
- Economies of Scale
 - The current staff of four trainers reaches 50% of organizations at a cost of \$101 per firefighter
 - Five trainers could reach 63% of emergency responders at a cost of \$96 per firefighter
 - Number of firefighters served per trainer drops from 2500 to 2000
- Non-Economic Return on Investment
 - Reduction of loss to life and injury to community and responders
 - Rural fire departments do not respond to incidents frequently enough to gain or maintain skill levels; the training environment recreates the incident to maintain skills
 - Firefighters receive training that caters to their needs
 - Improved community and firefighter confidence levels

Selected Examples of Return:

- The Plentywood Fire District was able to save its citizens approximately \$200,000 in annual insurance premiums by facilitating a change in their ISO rating
- On October 29, 2003, the life of a Billings woman was saved after being involved in a head on collision; “I’ve no doubt that our training and extrication equipment saved that woman’s life”, said Bruce Evans, Fire Chief – Geyser, Montana
- Of the first two fire companies to respond to a chlorine incident in the Alberton Canyon, only one had received training from FSTS on hazardous materials; members of the other company, with no FSTS training, ended up at the hospital

2

**Montana Agricultural Experiment Station
Integrated Weed Management and Biotechnology**

State Need:

- As part of the Montana Weed Management Plan, research is sorely needed on integrated weed management practices and biocontrol options on rangelands and croplands. Montana needs to be a world class leader in weed research.
- Animal and plant biotechnology are “clean” industries that can add value to livestock and plant systems which will enhance the current \$2 billion cash receipts from agriculture.

Market Reality:

- Land managers are continually seeking single and multiple approaches to contain, control and, possibly, eradicate noxious weeds. Chemical, mechanical, biological, reseeding and other practices may have potential use in different combinations specific to a site.
- Biotechnology is a key futuristic tool that can add value to animal and plant enterprises throughout Montana.

Current Problem:

- As one example, knapweed is conservatively estimated to cause \$14 million in direct negative impacts (reduced grazing capacity, degraded wildlife habitat) and \$28 million in indirect impacts (aesthetic, plant diversity) in Montana. Weed control efforts are a long-term proposition, costly and require integrated management.
- Production efficiencies and optimum management practices have been pushed to the limit in the green revolution. Montana needs to actively participate in the next leap, the gene revolution of enhanced quality traits.

Proposed Solution:

- Fill two vacant weed science positions, one in integrated weed management practices on rangeland and forested lands, and a second one in biological control (disease and insect) for cropland and rangeland weeds.
- A position in either animal or plant biotechnology to apply molecular genetic tools to improve the quality of animal and plant products.

Required Investment:

- 06 \$239,950 Three positions at \$79,983 (salary at \$60,000 plus associated benefits)
- 07 \$239,950 Three positions at \$79,983 (salary at \$60,000 plus associated benefits)
 - Historically industry has provided monetary and product support for MAES research programs we would expect this support to be on going if the positions are filled.

Return on Investment:

- Effective, efficient and integrated weed management that is profitable, long-lasting and environmentally sound.
- Introduction of value-added traits to animal and plant systems will lead to more land manager income and increased dollars in rural communities.

Selected Examples of Return:

- Implementation of cost-effective weed management practices increases net returns that in turn, multiply through these basic industries.
- Increased tenderness in beef or increased protein in wheat would generate additional income due to enhanced quality.

Provide Access to Higher Education through Support to Tribal Colleges

State Need:

- Montanans need increased access to higher education, in particular two-year education.
- Low per capita income, high tuition rates, and the rural nature of Montana all restrict access to higher education.

Market Reality:

- 80% of the fastest-growing jobs in the country require education beyond high school.
- Only 54% of Montana high school graduates attend college, compared to 62% nationally.

Current Problem:

- The tribal colleges provide a valuable point of access to higher education for all Montanans. There are approximately 300 non-beneficiary students attending the tribal colleges each year. The tribal colleges receive no federal funding for these Montana resident students.
- Montana statute provides for \$1,500/FTE of state support each non-beneficiary student enrolled in a tribal college. However, this appropriation is contingent upon specific funding in HB002.
- Over the last 10 years the funding for non-beneficiary students enrolled in the tribal colleges has varied from \$0/FTE to \$1,457/FTE. This lack of consistent funding discourages the use of tribal colleges as a point of access for students and places a significant burden on the tribal colleges

Proposed Solution:

- Secure base funding is HB002 for the support of non-beneficiary students attending tribal colleges or amend the current statute to provide a statutory appropriation for this support.

Required Investment:

- The state provided \$96,500 for support of non-beneficiary students for the FY04-05 biennium. An increase of approximately \$800,000 will provide funding at the statutory level of \$1,500/non-beneficiary student.

Return on Investment:

- Increased access to higher education resulting in a better trained workforce and greater income for residents.
- Creation of a stronger business climate.

Selected Examples of Return:

- Increased business productivity, increased earnings, and an improved business climate.

#2

MEA-MFT Recommended Initiative 1: Assuring a Quality and Competitive University System

State Need:

- Montana needs active, affordable, and high quality universities, colleges, and technical schools to serve as economic engines, cultural centers, and information agencies to keep Montana as an attractive choice for business and industry development.

Market Reality

- 80% of the fastest growing jobs in the country require postsecondary education.
- Public university students typically desire to reside in and work in the state where they receive their postsecondary education.
- The most important business location consideration is access to a skilled and educated workforce.
- College and university communities in other western states have seen and contributed to unprecedented economic growth as the "knowledge economy" continues to expand.

Problems

- Montana's colleges and universities are struggling to recruit and retain high quality faculty members due to low salaries, high teaching loads, and reduced benefit levels.
- Faculty salaries for two year faculty are the lowest in the country.
- Faculty salaries for four-year faculty are amongst the lowest in the country when comparing to peer institutions and controlling for cost of living differences.
- Montana's tuition and fee levels at public institutions are now amongst the highest in the western United States.
- Montana's total investment in public higher education ranks behind only Vermont and New Hampshire.
- Montana higher education institutions are becoming less attractive to prospective students from out of state.
- Retention rates for students at Montana's public universities are amongst the lowest in the country (48th out of 50 states).
- 6-year graduation rates for students at Montana's public universities are amongst the lowest in the country (43rd out of 50 states).
- Montana University System facilities are becoming increasingly outdated and in disrepair due to years of deferred maintenance.

Proposed Solution:

- Restore Montana support for public higher education to present law base levels as defined prior to the 2003 legislative session. Required investment: \$39.05 million.
- Engage the legislature, governor, and Montana public in a statewide plan to bring state investment in higher education up to the national average spending per capita by 2009. Required investment by 2009: \$45 million per year additional spending on higher education.
- Engage the legislature, governor, and Montana public in a statewide plan to bring higher education spending per capita up to the regional (ND, SD, ID, UT, WY) average by 2013. Required investment by 2013: \$90 million per year additional spending on higher education.
- With this additional spending, commit to increasing faculty salaries to market levels for faculty and staff at all institutions.

Required State Investment – 2006-2007

- \$39.05 million.

Return on Investment

- For every state dollar expended on higher education in Montana, Montana's colleges and universities have been consistently returning \$3 to the state's economy in the form of out-of-state tuition, research grants, contracts, student expenditures for housing and services, and much more.
- For every million dollars invested in the Montana university system, nearly 60 private sector jobs are created.
- Assuming an increase of \$19.5 million in each of the next two years, these numbers would translate into a \$58.5 million increase per year in related economic activity in Montana, and a net increase of over 1100 private sector jobs.

#2

MEA-MFT Recommended Initiative 2: Providing Qualified Teachers to Montana Schools

State Need:

- In 2001, the Montana Board of Public Education created an alternative route to teacher endorsement (full licensure) that allows Montana educators to teach outside of their endorsed area, provided they are in an approved program to achieve a new endorsement within three years. The program is entitled the Montana Teaching Endorsement Internship program.
- This new option immediately had the potential to alleviate the need for over 60 specialized teachers in the state of Montana. Most of the need comes in high demand, low supply teaching fields such as library, math, science, music, and fine arts.

Market Reality:

- Montana schools are struggling to find qualified teachers as current and newly educated teachers are being lured to other states by the promise of higher salaries and enhanced benefits.
- Many districts around Montana do not have licensed and endorsed applicants for open positions. According to survey data, this is happening with much more frequency.
- Montana recently provided \$250,000 to the university system to provide actual high school courses to rural districts to help address the teaching shortage that currently exists in Montana. This same expense could have facilitated the qualification and endorsement of hundreds of Montana teachers who would now be eligible to teach foreign language and other curricular areas that are targeted by the university system's program. Providing qualified teachers to offer specialty area courses throughout Montana is much more cost effective than trying to offer these same courses for limited student populations at a statewide level. Each trained teacher then becomes a local and regional resource, able to reach far more students over time.

Current Problem:

- After creating the option for Montana Teaching Endorsement internships, the Board of Public Education and Office of Public Instruction began working with Montana University System units to provide programs for current Montana teachers to enter the endorsement internship program.
- Because the endorsement internship program must be individualized for every candidate and necessarily involves creating new learning opportunities for remote, non-traditional students, MUS campuses have been largely unable to provide the number of endorsement internship programs they would like to offer.

Proposed Solution:

- Develop a Montana University System strategy for offering teacher endorsement internships that draws on the strengths and resources of all of Montana's existing teacher education programs.
- Develop additional on-line courses and mentoring capabilities in multiple teaching fields that can be utilized by Montana teachers to gain new endorsements.

Required State Investment:

- \$1 million for the 2005-2006 biennium to be granted to teacher education programs to develop coursework and strategies to enable additional internship opportunities.

Return on Investment

- Each position that is filled by an experienced Montana teacher will save Montana school districts hundreds of dollars in recruitment, advertising, and human resource expenses.
- Schools will have capable and qualified educators in classrooms where teaching positions were often given to non-certified or emergency licensed individuals.
- Montana university units will gain from additional student populations taking courses.
- Students will receive individualized instruction from fully certified, on-site educators, resulting in improved educational opportunities.

#2

	FY96	FY97	FY98	FY99	FY00	
Non-Ben	341.75	319.12	N/A	N/A		286.29
Total Fur	\$468,701	\$436,895	\$0	\$0		\$417,000
Funding/l	\$1,371.47	\$1,369.06	\$0.00	\$0.00		\$1,456.57

Tribal College Assistance - Total Funding and Funding per Full-Time Equivalent Resident Non-Beneficiary Student

	Reported Non-beneficiary FTE	Total State Funding	Funding per Non-beneficiary FTE
FY96	341.75	\$468,701	\$1,371.47
FY97	319.12	\$436,895	\$1,369.06
FY98	No Funding	\$0	\$0.00
FY99	No Funding	\$0	\$0.00
FY00	286.29	\$417,000	\$1,456.57
FY01	321.19	\$417,000	\$1,298.30
FY02	289.03	\$96,500	\$333.88
FY03	No Funding	\$0	\$0.00
FY04	In Progress	\$96,500	In Progress
FY05	No Funding	\$0	\$0.00

Full-Time Equivalent Reside

Tribal College
Little Big Horn College
Stone Child College
Salish Kootenai College
Blackfeet Community College
Dull Knife Memorial College
Fort Belknap College
Fort Peck Community College
Total FTE

#2

FY01	FY02	FY03	FY04	FY05
321.19	289.03	N/A	Pending	N/A
\$417,000	\$96,500	\$0	\$96,500	\$0
\$1,298.30	\$333.88	\$0.00	Pending	\$0.00

nt Non-Beneficiary Enrollments Reported by Tribal College

FY96 Non-B FTE	FY97 Non-B FTE	FY00 Non-B FTE	FY01 Non-B FTE	FY02 Non-B FTE
22.24	18.76	12.60	56.15	27.00
2.30	0.00	2.00	6.00	18.00
207.00	194.00	191.49	173.18	176.70
42.78	36.06	29.80	24.29	12.00
15.50	14.23	25.00	19.23	15.00
15.70	15.50	1.44	16.58	18.33
36.23	40.57	23.96	25.76	22.00
341.75	319.12	286.29	321.19	289.03

Montana University System - Possible Budget Metrics for Budget Reporting

Expenditures

- CU Expenditure per FTE as a % of Targets or Peers
- Explanation of Uses of Increased CU Funding
- CU Expenditures by program (MUS)
- CU Expenditures by expenditure type (MUS)(personal services, operating, capital, etc.)
- Total CU Expenditures/FTE
- Historical Expenditures per FTE (Nominal and CPI adjusted)
- Expenditures by fund (MUS)
- Explanation of Increased Funding (Restricted, Designated, Plant, etc.) (by Campus)
- Library Expenditures as a % of CU
- Technology Investments as a % of CU
- O&M Expenditures as a % of CU

Tuition/Affordability

- Average Undergraduate Resident (Historical) (MUS and by Campus)
- Resident Tuition and State Support vs. Expenditure per Student
- Resident and Non-resident Tuition vs. Legislative Peers (Historical by Campus)
- Resident Tuition as a % of Expenditure per FTE (MUS & by Campus)
- Non-resident Tuition as a % of Expenditure per FTE (MUS & by Campus)
- Tuition and Fees as a % of Median Household Income

Funding

- Historical MUS CU Funding (GF, Millage, Tuition, Other)
- Higher Education as a % of Total State GF
- State Support (GF & Millage) per Resident FTE (Current and Historical)

Enrollment

- By Campus (resident and non-resident)
- 2 yr. And 4 yr. (MUS)
- Resident and Non-Resident (MUS & by Campus)
- Undergraduate and Graduate
- Historical

Employment

- CU FTE By Category (Faculty, Admin, Professional, Classified, etc.) (Current and Historical)
- Students per CU Employee
- Student/Faculty Ratio
- All Funds FTE by Category
- Average Faculty Salary by Rank...by Institution