

MONTANA UNIVERSITY SYSTEM**2011 BIENNIUM BUDGET PLANNING – NEW PROPOSALS (JANUARY 2008)**

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| UNIT/CAMPUS: MONTANA FORESTRY AND CONSERVATION EXPERIMENT STATION | UNIT PRIORITY: 1 |
| NEW PROPOSAL NAME: CLIMATE OFFICE | |
| BOARD OF REGENT STRATEGIC GOAL: ___ACCESS _X_ ECON DEV ___ EFFICIENCY _X_ RECRUIT/RETAIN | |
| TOTAL BIENNIAL COST: \$405,000 | FUNDING SOURCES: State Appropriation |
| FY 10 TOTAL COST: \$205,000 | FY 11 TOTAL COST: \$200,000 |
| FY 10 BASE FUNDING REQUESTED: \$200,000 | FY 11 BASE FUNDING REQUESTED: \$0 |
| FY 10 OTO FUNDING REQUESTED: \$5,000 | FY 11 OTO FUNDING REQUESTED: \$0 |
| ADDITIONAL STAFF IN FY10 (FTE): 2.00 | ADDITIONAL STAFF IN FY11 (FTE): 0 |

DESCRIPTION OF NEW PROPOSAL:

PROPOSED PROJECT

Hiring of a State Climatologist and an Outreach Coordinator for the Montana Climate Office within the Montana Forest and Conservation Experiment Station

GOAL / STRATEGY

MUS--Economic Development—Assist in the expansion and improvement of the State's economy through the development of high value jobs and the diversification of the economic base

- Workforce and research initiatives

UM Strategic Directions

- To strengthen and broaden graduate and research programs and increase graduate enrollments
- To contribute appropriately to the cultural and economic development of the State

IMPLEMENTATION RESPONSIBILITY

Director, MFCES

IMPACT

An enhancement of the MFCES in this area of climate and meteorology would have significant impact on land management and management research in Montana, enhancing on-going agricultural and resource management activities. With significant climate change effects in Montana, including rising temperatures and shorter winters, persistent summer drought, and changes in the resiliency of plant and animal communities, ranchers and farmers, foresters and range managers, cities and towns, and members of the tourism community are feeling effects of these changes. Montana has no capability to develop climate

metrics and information and no ability to transfer needed information to all of the affected individuals, businesses, and regulatory agencies that need real-time and accurate information and maps. A PhD level biometeorologist coupled with an outreach specialist would be able to develop new climate metrics for the state, and update them regularly. They would be able to develop trustworthy state maps of growing seasons, heating and cooling degree days, energy forecasting, irrigation demand, solar loading, wind potential, averages and extremes of temperature and precipitation, and many other things, and get this information into the hands of those who need the information.

These professionals would be able to build and keep current the Montana Climatology Office website, develop educational materials, and deliver needed information to stakeholders and constituents around the state. They would be able to assist state decision makers at all levels and in all sectors make smart decisions about response to weather and climate effects.

Given that the Montana Climate Office and the State Climatologist are already hosted by the MFCES, but unfunded by the State or anyone else, the MFCES is a natural place for this budget enhancement. Enhancement of the Office as proposed would provide the products and benefits described above and it would ensure the access to many other programs within the MFCES that bring data and information on climate to the State (e.g. NTSG) and programs that need meteorological information for their effective implementation (e.g. National Center for Landscape Fire Analysis). In addition to many users around the state, enhancement of the Montana Climate Office would positively effect graduate education and research in natural resources, business, and many other areas.

ACTION PLAN

- Initiate search for PhD level biometeorologist and MS level outreach coordinator; May 1, 2009; MFCES Director appoints search committees
- Hiring completed for biometeorologist by September 1, 2009 and for outreach coordinator by July 1, 2009; MFCES Director
- Development of products, web pages, etc. begins upon hiring and continues indefinitely; new staff.

HOW SUCCESS IS MEASURED:

- Hiring of people specified
- Development of an interactive web page and weekly updating of the page
- Development and distribution of map products
- Clients served through web page, distribution of map products and publications, individual and group training

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| UNIT/CAMPUS: MONTANA FORESTRY AND CONSERVATION EXPERIMENT STATION | UNIT PRIORITY: 2 |
| NEW PROPOSAL NAME: WILDLAND INTERFACE IN MONTANA | |
| BOARD OF REGENT STRATEGIC GOAL: <input type="checkbox"/> ACCESS <input checked="" type="checkbox"/> ECON DEV <input type="checkbox"/> EFFICIENCY <input checked="" type="checkbox"/> RECRUIT/RETAIN | |
| TOTAL BIENNIAL COST: \$65,000 | FUNDING SOURCES: State Appropriation |
| FY 10 TOTAL COST: \$0 | FY 11 TOTAL COST: \$65,000 |
| FY 10 BASE FUNDING REQUESTED: \$0 | FY 11 BASE FUNDING REQUESTED: \$60,000 |
| FY 10 OTO FUNDING REQUESTED: \$0 | FY 11 OTO FUNDING REQUESTED: \$5,000 |
| ADDITIONAL STAFF IN FY10 (FTE): 0 | ADDITIONAL STAFF IN FY11 (FTE): 1.00 |

DESCRIPTION OF NEW PROPOSAL:

PROPOSED PROJECT

Initiation of a forestry, wildland fire, and biofuels research program focused on the Wildland-Urban Interface in Montana.

Many Montana residents live within the “wildland-urban interface,” or WUI, where frequent wildfires present risk to their homes and infrastructure. There are numerous opportunities across the state to provide science-based, vegetation treatments in the WUI to help reduce this risk, while improving the vigor, productivity, and beauty of these forests and enhancing production of bio-fuels. Simultaneously, the revenue from these vegetation treatments can be utilized to restore watersheds and improve water quality. However, treatment design, maintenance needs, social and economic incentives, ecological impacts, and risk-reduction effectiveness can vary greatly based on specific resource conditions, and there is a need to develop, test, and communicate operational guidelines for treatments across the varied landscapes that comprise the WUI. Active applications of a range of treatment designs and thorough, science-based evaluations of these treatments would provide confidence to forest landowners that their diverse range of objectives could be fulfilled. These guidelines, backed by science tested protocols for monitoring, would allow timber operators to increase the number of treatments across Montana, creating additional jobs in the timber and wood products industries, and providing additional protection from wildfire risk to WUI residents. The active treatment of forests with high fuel loadings will also reduce the impacts of high intensity wildfires, allowing for the long term restoration of natural processes in Montana watersheds. The Montana Forest and Conservation Experiment Station at The University of Montana has the expertise and experience among its faculty, students, and partners to create and test the necessary guidelines and monitoring protocols for forest treatments and restoration operations in the WUI, and through outreach to its network of cooperators in the forestry profession, can disseminate this information to timber operators and the public.

A new MFCES scientist is needed to lead this program and this scientist will need to employ graduate and undergraduate students to implement the program. Requested is one MFCES faculty position, support for two graduate research assistants, and operating funds for the program.

GOAL / STRATEGY

MUS—Economic Development—Assist in the expansion and improvement of the State's economy through the development of high value jobs and diversification of the economic base

- Graduate education enhancement
- Workforce and Research Initiatives

UM Strategic Directions

- To strengthen and broaden graduate and research programs and increase graduate enrollments
- To contribute appropriately to the cultural and economic development of the State

IMPLEMENTATION RESPONSIBILITY

Director, MFCES

IMPACT

Implementation of this proposal will initiate an aggressive development of a research and outreach effort focused on the critical wildland-urban interface. As research progresses and new protocols for management are designed for this critical geography, and delivered to management, regulatory, and safety organizations (through whom we currently are spending millions of dollars for protection), wildland fire activities should be reduced, biofuels production should increase, lives and property should be saved, and state costs of wildland fire suppression should be reduced. Employment will increase in the forestry sector, graduate and undergraduate students will be trained to deal with wildland-urban interface issues, home and town sites, recreational opportunities, wildlife habitats, and watersheds should be better protected.

There are many entities involved in issues of the WUI and this research and outreach program is just one piece of what is needed for effective WUI management, but without a dedicated and progressive research program we will continue muddling our way through WUI management, with the attendant costs of less than fully knowledgeable management protocols and planning.

ACTION PLAN

- Initiate search for PhD level forest researcher to coordinate program; May 1, 2009; MFCES Director appoints search committee
- Hiring completed for faculty leader by October 1, 2009; MFCES Director
- Recruit graduate students for fall 2010 start; new faculty member
- Initiate research and development management oriented products

HOW SUCCESS IS MEASURED:

- Hiring of people specified
- Number of active research and outreach projects
- The number of acres treated among Montana landowners that restores vegetative conditions to lower levels of forest fuels and reduced wildfire risk;

- The number of landowners participating in forest management activities in the WUI;
- The additional number of forest management jobs created via WUI forest treatments;
- The number of ancillary jobs in related fields such as trucking, marketing, sawmill operations, and financial services to landowners;
- The number of acres where fire intensity remains in the low to medium intensity categories because of vegetative treatments in the WUI;
- The dollar value of infrastructure protected by applying new treatments in the WUI.

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| UNIT/CAMPUS: MONTANA FORESTRY AND CONSERVATION EXPERIMENT STATION | UNIT PRIORITY: 3 |
| NEW PROPOSAL NAME: APPLIED FOREST MANAGEMENT AND OUTREACH PROGRAM | |
| BOARD OF REGENT STRATEGIC GOAL: <input type="checkbox"/> ACCESS <input checked="" type="checkbox"/> ECON DEV <input type="checkbox"/> EFFICIENCY <input checked="" type="checkbox"/> RECRUIT/RETAIN | |
| TOTAL BIENNIAL COST: \$430,000 | FUNDING SOURCES: State Appropriation |
| FY 10 TOTAL COST: \$220,000 | FY 11 TOTAL COST: \$210,000 |
| FY 10 BASE FUNDING REQUESTED: \$210,000 | FY 11 BASE FUNDING REQUESTED: 0 |
| FY 10 OTO FUNDING REQUESTED: \$10,000 | FY 11 OTO FUNDING REQUESTED: 0 |
| ADDITIONAL STAFF IN FY10 (FTE): 1.00 | ADDITIONAL STAFF IN FY11 (FTE): 0 |

DESCRIPTION OF NEW PROPOSAL:

PROPOSED PROJECT

Enhance the Applied Forest Management and Outreach Program

Forests provide multiple benefits to the people of Montana, and as scientists, managers, and citizens have grown to realize their significance to our quality of life, there is a need for greater coordination and cooperation in management across Montana's watersheds and landscapes to ensure forests provide the full range of uses and services. For many landowners, the implications of a single forest management activity are difficult to discern, and residents have few tools to visualize or understand how they could work with their neighbors for mutually desirable outcomes. Further, there are few places or settings where people can jointly deliberate about their expectations for our shared forest heritage and come to agreement about steps that can be taken to restore forested landscapes to healthy, fully functional conditions. The Montana Forest and Conservation Experiment Station at The University of Montana has established an Applied Forest Management Program as part of the Station to conduct research on issues of active management. What are needed to complement this research program are outreach services and visible demonstrations of effective actions. This program would provide citizens in the state a convenient site for participatory research, demonstration, education, and outreach regarding the active management of forests and rural properties. The outreach component of the Applied Forest Management Program would encourage innovative, multi-party exchanges among citizens, scientists, and practitioners for the planning, implementation and monitoring of projects, utilizing the knowledge and skills of residents to address multiple management needs. The Program would also serve as a clearinghouse for information on forest management opportunities for landowners, providing training and outreach on acquiring the latest research findings and tools to solve common problems. The Program would utilize the facilities of the Lubrecht Experimental Forest (meeting facilities and demonstration areas) to host landowners who are striving to work together, allowing them to observe examples of management practices, as well as converse and consider opportunities for coordinated efforts. Demonstration areas

would highlight new techniques in forest operations, weed management, and biomass utilization. The Program would build on existing multi-party collaborative ventures, such as the Blackfoot Challenge, to encourage active land management.

Specifically needed is a research/outreach professor in the Applied Forest Management Program (AFMP) to conduct additional applied forestry research and to develop outreach and demonstration activities in cooperation with the Director of the AFMP. Requested is one MFCES faculty position, support for two graduate research assistants, and operating funds for the program.

GOAL / STRATEGY

MUS—Economic Development—Assist in the expansion and improvement of the State's economy through the development of high value jobs and diversification of the economic base

- Graduate education enhancement
- Workforce and research initiatives

UM Strategic Directions

- To strengthen and broaden graduate and research programs and increase graduate enrollments
- To contribute appropriately to the cultural and economic development of the State

IMPLEMENTATION RESPONSIBILITY

Director, MFCES

IMPACT

The direct impact of implementation of this program will be increased knowledge about how to do on-the-ground forestry work that is ecologically responsible and socially acceptable. This would lead to increased forestry activities, including increases in employment in a variety of well paying jobs, increased bio-fuels availability, reduced susceptibility to catastrophic wildfires, enhanced wildlife habitat and watershed protection, and reduced costs for fire suppression. Employment will increase in the forestry sector, graduate and undergraduate students will be trained to deal with applied forest management issues, individuals and communities will have better information for implementing applied forest management, and forests, wildlife habitat, and watersheds should be better protected.

Without such a program we will miss opportunities to assist and interact with companies, groups, and government agencies that are working on applied forest management activities in areas such as stewardship contracting, community forestry, and sustainable resource management. We would miss getting the best information being developed through research into the hands of those who need it in a timely manner. We also would miss significant opportunities to positively affect policy and regulatory development and get lands back into ecologically sustainable condition and into responsible forest production for wood and biofuels products.

ACTION PLAN

Initiate search for a PhD level forest researcher/ outreach specialist; May 1, 2009: MFCES Director appoints search committee

- Hiring completed for faculty member by October 1, 2009; MFCES Director
- Recruit graduate students for fall 2009 start; AFMP Director

Initiate new applied and outreach activities, including demonstrations

HOW SUCCESS IS MEASURED:

- Hiring of people specified;
- Number of active research and outreach projects;
- The number of landowners who are mobilized to adopt forest and range management innovations that support common objectives among all owners within a given landscape;
- The number of new demonstration areas and the number of requests for forest management information from the clearinghouse;
- The additional jobs and the amount of marketable commodities that are created by a more active approach to forest and range management;
- The number of acres restored to more fully functional, productive resource conditions.