

WIRED Quarterly Report: 2nd Quarter 2008, Montana's Agro-Energy Plan (MAP)

Grantee Name: Montana Department of Labor and Industry
Name of Project: Central and Eastern Montana WIRED Region
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**sections I-IV detail progress towards the four primary goals of Montana's WIRED initiative*

I

Goal: Develop a world-class bio-products industry that catalyzes regional economic transformation from an agricultural commodity driven economy to a value added economy that supports regional prosperity in Central and Eastern Montana.

Efforts to meet the goal of developing a world-class bio-products industry must address many issues. Some of these issues must be dealt with simultaneously and others must be addressed in anticipation of future requirement created by such an industry. To accommodate this multi-pronged approach for Montana's Agro-Energy Plan, multiple agencies and groups are involved. These include the Montana Department of Commerce, the Office of the Commissioner of Higher Education, the Department of Labor and Industry Workforce Services Division, the Department of Environmental Quality, and the Montana Department of Agriculture. Each of these agencies must play a role in the transformational initiative and they in turn will involve other organizations to meet this goal.

A. Efforts underway at agency level to meet this goal:

1. Montana Department of Commerce (DOC)

Early in the WIRED program, the DOC identified and provided funding to multiple businesses within the WIRED region that could advance the bio-products and bio-fuels industry in various ways through the application of employee training.

Examples of this activity include the following:

- **Earl-Fisher Biofuels, LLC:** This company is located in Chester Montana and their mission is to create local economic growth and employment opportunities by building a biodiesel production facility. The model envisioned at Earl-Fisher is well suited to the transformational goals of Montana's Agro-Energy Plan. The Earl-Fisher model is to create a market for oilseed crops that can be grown locally, converted to fuel locally, and consumed locally. By employing such a model they are transforming their local region by adding

value to agricultural commodities and spurring economic transformation of a small town within the WIRED region. While this project is small in comparison to others, it has embodied the concept of transformation. This company has given a small town hope that they will not have to face another school consolidation or the loss of another business on main street. The creation of this business has not only created hope, it also has allowed for the town family physician to retire and be replaced by one of the owner's spouses. Finding replacements for family physicians in these small towns is nearly impossible.

Short term goals are to hire seven new employees by year end. This would be a great asset in the community of Chester which has a population of around 870.

Long term goals at Earl-Fisher include duplicating this local, local, local, model throughout the Central and Eastern Montana. This could create clusters across the MAP region and utilize the Chester operation as a training facility as new clusters develop. For more details see page 33.

- ***The Montana Manufacturing Extension Center (MMEC)***: This is the MEP center for Montana. Although the DOC identified several grantees for WIRED training assistance, the department has also engaged the MMEC to seek out other opportunities to apply training in the MAP region throughout the duration of the program. The MMEC has a field engineer and staff member dedicated to the WIRED project. These people provide "boots on the ground" for Montana's Agro-Energy Plan. The MMEC is able to execute training assistance for small projects on their own, or through the use of third parties. For larger projects, the MMEC is able to facilitate an application through the DOC to the MAP Executive Steering Committee. For more details see page 15.
- ***Sustainable Systems, LLC (SS)***: This oilseed crushing plant is located in Culbertson. The WIRED training funds will be used for direct training of employees in conjunction with a large remodel, equipment upgrade, and providing support to growers. The expanded capacity of this plant represents a significant investment in the infrastructure need to support a growing biodiesel industry as well as providing a viable market to producers looking to grow oil seed crops. Thus having a major impact on the input factors facing the growth of the biofuels industry in Montana.

The goal is to create 39 new jobs at above average wage levels resulting in growth of the industry and increase in crops converted to oil seed production. For more details see page 23.

- **New Century Ag:** WIRED funds are being used to provide training for new employees in the operation of a proposed grain elevator in Westby. The elevator is approximately 65% complete and thus far, one employee has been trained. For more details see page 35.
- **Peaks & Prairies, LLC:** This bio-refinery crushes oil seed crops grown by members and refines the oils into bio-lubricants. They are currently in a research and development phase of refining their intellectual property and testing the primary product. Results have been very positive and they are working out a capital investment deal that will hopefully allow them to meet their goal. Their goal is to create 30 new jobs by the end of the project and manufacturer their product in rural Montana. For more details see page 28.

2. Office of the Commissioner of Higher Education (OCHE)

OCHE is a critical component in developing a workforce pipeline for the bio-products industry. Curriculum development and student training is being done at community colleges, Tribal colleges, and universities in the MAP region. These institutions are in turn partnering with the local community and industry. Examples of this include the following:

- **Fort Peck Community College (FPCC):** FPCC has partnered with Montana State University (MSU) to produce a series of educational guides related to the bio-fuels and bio-energy fields, farm policy, oilseed crops, and more. Biofuel production workshops have also been held throughout the MAP region. For more details see page 28.
- **Montana State University-Northern (MSUN):** MSUN is playing multiple roles in Montana's Agro-Energy Plan. They are primarily an education institution and have one of the premier diesel technology programs in the nation. MAP has allowed them to expand this curriculum to include biodiesel, thus keeping their program on the forefront of diesel technology. MAP has also enable the lab, testing center, and facilities at MSUN to be upgraded to be able to better support a world-class bio-fuels and bio-lubricants industry in Montana. Without such a lab in Montana, testing and sampling would need to be conducted out of state with an increase in cost and time. The added capacity at MSUN has also attracted attention from companies outside of Montana seeking world class testing facilities for their products or products. For more details see page 45.

3. Department of Labor and Industry Workforce Services Division (DLI WSD)

DLI WSD plays a critical role in ensuring that the region's workforce has the skills that will be required to support a world-class bio-products industry. Some of these skills include welding, CDL training, concrete technologies, utility lineman training, and more. DLI WSD collaborates with universities, community colleges, and tribal

colleges in the region to implement programs. DLI WSD also works closely with the Tribal nations in the region to leverage the significant workforce available in those locations. An example of this activity follows:

- In June a two-week course on heavy equipment operation was coordinated with the Crow Agency. Dan Archer, the director of the heavy equipment operator program at Miles Community College, taught the course on the Crow Agency. The Crow Tribe supplied the classroom space and the machinery. WIRED funds were used to pay for participant's tuition and safety equipment. Twenty-two participants learned the basics of operating heavy equipment including things like how to work safely around equipment, how to care for equipment, and how to read grade stakes. As part of the training, students were required to operate the equipment at a job site. For more details see page 55.

4. The Montana Department of Environmental Quality (DEQ)

Although the DEQ was already involved in MAP through partnerships, they were officially brought in at the agency level in 2008. As the environmental regulatory and permitting agency for Montana, it is critical the DEQ be involved in the creation of a world-class bio-products industry in the region. This transformational initiative will involve the development of industry that has not before been seen in the region or in Montana. Therefore, active involvement by DEQ can facilitate a smoother path for the transformation of the region. An example of DEQ's involvement follows:

- The DEQ is coordinating with the National Biodiesel Board (NBB) to conduct outreach and workshops to industry in Montana with the goal of promoting the use of biodiesel. Currently DEQ is working with the underground mining industry to promote the use of biodiesel in facilities. The DEQ plans to expand this outreach program to the petroleum industry. The NBB is the national trade association representing the biodiesel industry and is the industry's central coordinating entity. If successful in Montana, the NBB is considering expanding this type of partnership to other states.

5. The Montana Department of Agriculture (DOA)

The DOA has a Bio Product Innovation Center Network that provides customized training and technical assistance in bio-product business development to existing businesses, entrepreneurs evaluating new business opportunities, members of cooperatives pursuing bio-product and related agricultural business opportunities, and producers interested in growing feedstock for the biofuels industry. The network has centers throughout the MAP region. They can assist in conducting feasibility studies, writing business plans, and more. Due to the nature of the type of assistance they provide, many of their clients are early stage. Examples of some of the groups they work with and assist follow:

- **Lake County Community Development Corporation (LCCDC):** This group offers commercial USDA certified kitchen facilities and technical assistance to producers in the MAP region at an affordable, hourly rate. This allows small producers to package, label, and market their value-added products without incurring the cost of building their own kitchen. For more details see page 42.
- **Midland Bull Test:** Midland Bull Test has been an international seed stock industry leader in marketing as well as providing valuable data through animal production testing. This facility tests and markets animals for beef producers from all across the state and nation including many in the MAP region. Midland has discovered a cutting edge system to measure feed efficiency in cattle on a large scale and have partnered with Texas A&M University and Montana State University in the collection and storage of daily data on all animals in their facility for further research. This will revolutionize the seed stock business by giving expense-wary commercial cattlemen the data to select the most efficient bloodlines. This is key when considering the high cost of maintaining cattle is in feed (70%+). Technical assistance is being provided in general business management and business expansion activities. For more details see page 38.

II

Goal: Develop a highly trained and stable/growing workforce to support bio-products and other value-added agricultural products.

Many of the skills that will be required to support the bio-products industry are in high demand. This situation is due to a decades-long trend of decreasing population and opportunity. Most areas and communities in the MAP region reached their population peak in the 1920's. This creates a cycle of attrition of opportunity. That is, the more people that leave the region to pursue opportunity elsewhere, the fewer people are left in the region to create a core community that can build businesses and opportunities for future generations.

Therefore, it is critical to address the need to assist in the development of a highly trained and stable/growing workforce. To focus on the other areas in the development of MAP's world-class bio-products industry without addressing this need would result in a vacuum of trained people in the region that would need to be filled from outside areas.

The goal of developing a highly trained and stable/growing workforce for those people within the MAP region is being pursued at many levels. The DOC, DLI WSD, and OCHE are all involved in helping to develop the skills of the workforce. This is being done at businesses for new and incumbent workers, at community colleges and universities for students, at workforce service centers and elsewhere for unemployed individuals, at Tribal colleges and reservation locations for the Tribal nations, at industry specific seminars for farmers, ranchers, and entrepreneurs, and more. The skills required for

the bio-products industry are many and more will emerge with new developments and technology. Because the technology and industry is constantly changing, the skills required to support this emerging industry are changing as well. However, MAP has identified the core skills needed to prepare a workforce for the biofuels and bioproducts industry. These skill sets also support the growth of the energy and construction industries within the region, also a major opportunity for transformation. Couple those skills with the capacity to add specific skill sets needed in the biofuels -bioproducts industry, and we are positioning the regions workforce for success.

A. Efforts underway at agency level to meet this goal:

1. Montana Department of Commerce

The DOC is assisting in developing a trained workforce via new and incumbent worker training at new and existing businesses. These funds give the businesses added ability to train workers with specific skills as their business needs dictate. This training can be done in-house, at remote locations, or via third party provider. This training not only supports the growth of a highly trained workforce, but also supports the growth of the biofuels – bioproducts industries in the region.

Examples of this training follow:

- **Montana Manufacturing Extension Center (MMEC):** In addition to the specific businesses funded with training dollars, the DOC is also enlisting the help of the MMEC to meet training needs in other businesses in the region that are not themselves already MAP grantees. This allows for the DOC to meet training needs big and small.
- **Fort Belknap Indian Community (FBIC):** MAP funds helped FBIC provide job training for a workforce in the production of smoked meat products made by their tribal enterprise, the Little River Smoke House. The goal was to develop smokehouse procedures to produce high end meat products from low end cuts of meat allowing the Tribe to develop a flow of meat products for all cuts of meat. This project is complete. Three positions have been trained and incorporated into the smokehouse staff. They are now able to produce their products under USDA inspection and market nationally. Their next stage of development will be to market their product on a national level and eventually on an international level. For more details see page 29.
- **Safflower Technologies International, LLC (STI):** The purpose of the grant is to provide funding for the training of 8 employees in the operation and maintenance of a seed cleaning and storage facility in Fairview. Thus far, forklift, auger, seed cleaning and agronomy training

has occurred. STI reports an increase in safflower oilseed crop production of 5000 acres for 2008. For more details see page 35.

2. Office of the Commissioner of Higher Education

OCHE primarily focuses on workforce training for the bio-products industry with students in universities, community colleges, and Tribal colleges. Examples of this work follow:

- **Dawson Community College (DCC):** Students are being trained in both welding and biodiesel technology. In addition, a mobile biodiesel reactor is almost complete and will be travelling to venues in the fall for training. For more details see page 54.
- **MSU-Northern partnership with Mid-South Community College, another WIRED Recipient in the Arkansas Delta Project:** MSUN staff traveled to Arkansas for a meeting focused on synergies that the two colleges could create that would be mutually beneficial to both and would create programs to provide a highly trained workforce for the biofuels/transportation industry. Mid-South is located in a transportation hub with over 10 large distribution centers such as Walmart, FedEx, and Swift. The Industry is in need of diesel techs with training in biofuels. They are modeling their program after Northern's Diesel 2-year program as well as the Testing Center. MSU-Northern will mentor Mid-South with curriculum development, staff training and develop and Testing Center set up and configuration. For more details see page 47.

3. Montana Department of Labor and Industry Workforce Services Division

DLI WSD is helping to develop a highly trained workforce for the bio-products industry by providing training via their workforce center network. DLI WSD reports that the demand for their training services has exceeded their expectations. DLI WSD is able to focus not only on the unemployed, but also on moving people up the earning ladder by adding skills to their current skill-set. The Tribal workforce has also been a focus of DLI WSD. The reservations have high rates of unemployment and have established community networks with whom to facilitate training. Examples of DLI WSD work follow:

- DLI WSD recently negotiated an On the Job training opportunity for a 2008 graduate from Poplar High School as a heavy equipment operator with Miller Construction Services in Sidney. The trainee went directly from high school to the OJT. The trainee was very instrumental in developing the OJT and after 1 month in training both employer and trainee report all is going well. Miller Construction does oil well site development and maintenance work in the Sidney, MT area. For more details see page 60.

- Eleven individuals went through cement training to obtain skills needed for securing wind mills for a new wind farm being developed in the Cut Bank area. For more details see page 57.
- Montana Peaks provided training for 14 people in Bobcat, Forklift, and Hazmat. Attending the graduation were regional representatives including Hank Hudson from Office of Public Assistance, Clifford Kicking Woman with Blackfeet Manpower, and Anna Whiting-Sorrell, from Governor Schweitzer's office with all expressing their appreciation for training provided by the MAP program. For more details see page 57.

III

Goal: Create an agile, integrated talent development system (workforce, education, and economic development) that will prepare state residents to act quickly to take advantage of new economic opportunities and is responsive to business needs.

Integration and cooperation amongst government agencies, businesses, investors, academic institutions, entrepreneurs, and citizens are critical components to achieve the goals of MAP. Because the goals of MAP are broad and cross into many varied disciplines this cooperation is a necessity.

The ability to respond to needs quickly and comprehensively is critical for the development of an emerging industry or the transformation of a well established industry. Failure to act in a timely manner can mean lost opportunity for industry and the region. The integration of the talent development system can help to eliminate slow responses by creating a platform for communication amongst industry, education, economic development, and the workforce system.

One tool used take advantage of new economic opportunities and respond to business needs is the State Workforce Investment Board (SWIB.) This board is comprised of representatives from state government, industry, labor, education, workforce, and economic development. As needs or issues arise they can be brought to the attention of the SWIB to help create solutions through cooperation and coordination of resources.

A. Efforts underway at agency level to meet this goal:

1. Multi Agency Efforts

MSU Northern: During Montana's last legislative session in 2007, the DEQ proposed funding a fuels testing lab in Montana. At the time of this effort DEQ was not an official grantee of the MAP effort, however they were actively engaged in efforts supportive of MAP's goals and were working in cooperation with the MAP initiative. DEQ's funding proposal was passed and resulted in the procurement of

fuel testing equipment being purchased and placed at MSU Northern. The addition of this equipment greatly enhanced the MAP funding already in place at the college. In turn MAP has enhanced funding for MSU N so that curriculum can be developed to train students on the fuel testing equipment. This is strong example of a multi agency effort to respond to an opportunity to create a talent development system that will prepare our youth for the careers of the future.

2. Montana Department of Labor and Industry Workforce Services Division:

The DLI has engaged in multiple transformational steps to support better collaboration and cooperation within the talent development system. The primary transformation came through the consolidation of Montana's Workforce Investment Boards into a single state wide board. DLI also reorganized the Job Service Workforce Centers regional areas to align with the DOC regional economic development offices. This will facilitate better communication and cooperation amongst the economic development and workforce services.

Additionally, efforts are underway to explore the utilization of working groups through the WIRED model as an avenue to add value to the SWIB. A WIRED Industry Working Group was recently formed as a pilot project. This group is comprised of members of the transportation, biofuels, mining, heavy equipment, energy, and environmental remediation industries. The group is examining issues such as:

- Evaluation of the workforce needs of the industry representatives with the goal of looking to the WIRED model for partnerships and solutions.
- Evaluation of the hurdles that need to be overcome to achieve adoption of biofuels by large industry
- Evaluation of infrastructure, transportation, and logistics issues that effect the growth of the energy industry in Montana
- Evaluation of how Montana energy development can proceed in a cooperative manner that best utilizes our natural resources and preserves our environment and way of life.

IV

Goal: Create an inclusive and sustainable regional identity and leadership structure that will promote innovation and ensure the long term success of the transformational initiative.

The MAP initiative is of limited duration and much of the progress will just be underway at the scheduled end of the program. However, the impact that the program has had inside and outside the region will leave a lasting impact. Transformation within the DLI has been spurred by this initiative and will remain in tact long after the program funding has expired. The network connections and leadership structures that are being established during the MAP program will exist and continue to operate to address issues in the future, as dictated by an executive order from the Governor.

Montana's Agro-Energy Plan is a part of the regional identity of Central and Eastern Montana. The opportunities presented in value-added agriculture and the new frontier of domestic, clean, renewable energy, in all its forms, offer incredible avenues to bring economic security and prosperity to Central and Eastern Montana.

B. Efforts underway to meet the goal of sustainability:

The SWIB is currently under transformation due to the recent consolidation of the local workforce boards into one state wide board. Part of this transformation is the rethinking of the board's methods of doing business and primary goals. Industry leaders on the board are looking to make it more responsive and effective in dealing with workforce issue. This transformation is an opportunity to transition the MAP concept into the SWIB's. The SWIB is an optimal structure to take on the sustainability of MAP as it is made up of members of the SWIB as well as other industry representatives.

Due to the nature of political transition the director is not currently engaging stakeholders in the discussion of sustainability. However, MAP is currently working to lay the foundation for the transition from a federal grant to a state sustainable program, which will allow for modifications in the transition due to political transition.

The director of MAP will be drafting a white paper on sustaining the MAP model in Montana. The white paper will be drafted in cooperation with the primary administrative officer of the SWIB, the board's director, as well as the members of the ESC. This paper will detail the manner in which the MAP model can be sustained within the State of Montana and the value it will create within the state.

V

Summary of grant activities this quarter

The ESC has been reviewing the status of funds allocated vs. funds spent by all grantees throughout the MAP initiative. The purpose of this activity is to learn if there is the possibility that any of the funds allocated to grantees will not be spent. The ESC is preparing a list of additional grantees to which funds can be allocated in the event that any current grantees will not fully utilize the funds.

The Montana Department of Commerce, the following took place during the second quarter of 2008 (further information on activities for the quarter can be found in section VIII of this report):

- The MDOC contracted with two new grantees in the second quarter, Decker Coal and D&M Water Service and three applications for funding are pending approval from the ESC.
- Ethanol Producers and Consumers, a MDOC grantee, held their “Biodiesel in Montana: Learn the Answers” conference at MSU-Northern in Havre on June 10th. This conference was attended by folks from across the MAP region and received significant media coverage.
- Peaks & Prairies, LLC, a MDOC grantee, continues to refine and improve the formulation for their motor oil. They are focused on the final formulation of the motor oil and getting certified testing underway. A bio-based motor oil that meets or exceeds ASTM specifications will be a great product with a vast, world-wide market.

The Montana Department of Agriculture, through its Bio-Product Innovation Centers, is providing technical assistance on multiple projects. The following projects are new for the second quarter of 2008 (further information on these projects and others can be found in section VIII of this report):

- East End Colony is building a fish hatchery to raise freshwater tilapia and market in the local areas. Bear Paw is providing East End with technical assistance as they go through the planning and construction phases of their project.
- Montana Hanna’s Restaurant: This restaurant was initially owned and operated by Jack Hanna and for years featured quality entrees with some local ingredients. Since it was purchased by the current owner they have gotten away from using the local products in their menu selection and have at the same time lost some of their market. Beartooth RC&D has been working on getting local products back on their menu and using that marketing again to increase visitation.
- Montana Hog Marketing Association: The group is made up of hog producers mostly from Hutterite colonies that have had a long standing relationship with a processor in Modesto, California. This has been a good relationship for several years and the processor is now looking to locate a processing facility on the Interstate 15 corridor and ship the processed meat not only to California but also to other possible locations. TA is being provided on site selection and business development.

- Montana Bar-BQ Co: Business currently includes selling barbeque sandwiches, sauces, and salsa at various events around Montana and Wyoming and would like to establish a “brick and mortar” location in Lewistown. Snowy Mountain Development Corp (SMDC) is providing technical assistance for business expansion.
- LD Construction: This company aims to develop, build, and operate a 1 – 5 mgw biomass (small diameter waste wood) electrical generation plant. Technical assistance is being provided for business start-up by SMDC.

Representatives of the Office of the Commissioner of Higher Education (OCHE) presented information before the American Association for Agricultural Education in Reno, Nevada. The topic was titled “What is all this talk about National Content Standards for Ag Ed?” Presentations were also given at the National Career Cluster Institute in Atlanta, Georgia. The presentations were titled “Agricultural Education Content Standards” and “Developing Careers in the Biofuel Industry.” Representatives also attended the WIRED academy in Boston and the National Association State Directors of Career & Technical Education Spring meeting in Washington, DC.

Efforts continue at Miles City Community College, Montana State University-Northern, Fort Peck Community College, and Dawson Community College to enroll students, develop curriculum, link with industry, and develop facilities and laboratories.

The Department of Labor & Industry Workforce Services Division reports that demand for their services within the WIRED program continue to exceed their expectations. The following is a sampling of the grant activities conducted by Workforce Services Division WIRED consultants during the quarter. For a comprehensive list see page 54.

The Billings area WIRED consultant traveled to Crow Agency with the local DVOP. He is interested in providing regular outreach services to veterans on the Crow reservation, and asked for assistance in making contact with the tribe.

In June a two-week course on heavy equipment operation was coordinated in Crow Agency. Twenty-two participants learned the basics of operating heavy equipment. Two other training courses were coordinated at Crow Agency in June for an additional twenty participants. In addition a WIRED consultant worked with the Crow TERO director to assist six people that wanted to attend service rig training at the Northwest North Dakota Workforce Training Center in Williston. Five of the six participants successfully completed the training and obtained certificates.

Eleven individuals went through cement training to obtain skills needed for securing wind mills for a new wind farm being developed in the Cut Bank area

SAGE Technical Services provided truck driver training resulting in successful completion for 15 people in Cut Bank.

Montana Peaks provided training for 14 people in Bobcat and Forklift and Hazmat.

A WIRED Consultant training was held in Helena with a focus on recording proper data to collect Common Measures.

Three individuals from Havre are enrolled in Montana Tech Lineman School for the fall of 2008 session.

An information booth on WIRED Program was coordinated for the Fort Peck Tribes Job Fair in Poplar.

The Department of Environmental Quality began WIRED activities in May of 2008. They are in the early stages of their involvement at the grantee level. Programs that they are pursuing include:

- Biofuels for School Districts
- Technical and Training Assistance for WIRED-Region Colleges and Universities
- Training for Industrial Users
- Training, Data Development, and Approvals for Biodiesel Co-products in Alternate Markets

VI

Challenges to project progress

Oilseed crop acreage: Much of the success of growing a biodiesel industry in Montana is hinged upon increased acreage of oilseed crops to be used as feedstock for biodiesel production. These oilseed crops are not typically planted as a primary crop. They are more suitable as a rotational crop and, as such, provide several benefits. Increasing oilseed acreage faces several challenges.

- Price increases in primary crops such as wheat have caused difficulty in increasing the amount of oilseed acreage. The choice to plant an oilseed in rotation is less appealing if the primary crop is trading at high prices.
- Oilseeds are not the only choice farmers have as a rotational crop. Peas and lentils are another suitable rotational crop in the MAP region and they offer the additional benefit of being nitrogen fixers for the soil. These crops are also seeing high prices now.

- Camelina has much potential as a biodiesel crop. Willingness to plant this crop is challenged by a lack of federal crop insurance. The lack of approval by AAFCO and others for the meal to be used as animal feed also creates an issue of what could be done with the meal co-product.

Input costs for bio-fuel producers: The increases in commodity prices across the board are resulting in increased input costs for bio-fuel producers. The biggest single cost for a biodiesel refinery is the oil or the oilseeds. The price for this oil is increasing. Prices for other inputs such as methanol or ethanol are also increasing.

Input costs for farmers: Although wheat and other crop prices are at high levels, the cost of doing business is also increasing for farmers. Fuel, fertilizer, transportation, and other costs have increased as well.

VII Promising innovation and processes and success stories

MSU Northern – Mid-South Community College: MSU-Northern has engaged in mentorship/partnership with another WIRED Recipient in the Arkansas Delta Project, Mid-South Community College located in West Memphis, Arkansas. Mid-South is located in a transportation hub with over 10 large distribution centers such as Walmart, FedEx, and Swift. The Industry is in need of diesel techs with training in biofuels. They are modeling their program after Northern's Diesel 2-year program as well as the Testing Center. MSU-Northern will mentor Mid-South with curriculum development, staff training and develop and Testing Center set up and configuration.

DLI WSD and the Tribal Nations: In June a two-week course on heavy equipment operation was coordinated in Crow Agency. Dan Archer, the director of the heavy equipment operator program at Miles Community College, taught the course. The Crow Tribe supplied the classroom space and the machinery. WIRED funds were used to pay for participant's tuition and safety equipment. Twenty-two participants learned the basics of operating heavy equipment. At the conclusion of the training, tribal chairman Carl Venne awarded certificates of completion to all twenty-two participants.

Two other training courses were coordinated at Crow Agency in June for an additional twenty participants. The topic of these trainings was industrial safety. It included an 8-hour Construction Safety Training Orientation Program (CSTOP) and a 4-hour course on First Aid and CPR. WIRED funds were used to pay for tuition and certification costs for both courses.

In addition a WIRED consultant worked with the Crow TERO director to assist six people that wanted to attend service rig training at the Northwest North Dakota

Workforce Training Center in Williston. Five of the six participants successfully completed the training and obtained certificates.

VIII Summary of grant activities to date

Montana Department of Commerce

Ongoing Activities:

- MDOC Regional Development Officers (RDO) meet with potential WIRED applicants in the region daily/weekly.
- Internal MDOC weekly meetings are held to discuss WIRED staff activities in support of the WIRED project.
- MDOC has received from MDLI the USDOL WIRED reporting matrix and is collecting information from grantees and including it as a quarter reporting requirement beginning with Q1 2008.
- MDOC staff contracted with two new grantees in Q2 2008, Decker Coal and D& M Water Service.
- MDOC staff have reviewed each grantee's progress toward completion of their contract as the end date for the WIRED program is drawing near.
- Staff made site visits to three grantees
- Three applications for funding are pending approval from the ESC

Challenges: No significant challenges

Department of Commerce grantee reports:

Montana Manufacturing Extension Center (MMEC)

\$699,134 WIRED Funds 1:1 Match

Project Description: MMEC will work with existing and new bio-product businesses within the WIRED region to increase manufacturing and production efficiency by training company employees. This activity will assist in WIRED funds being distributed to qualified Montana manufacturers in an effort to diversify and increase the economic base in the WIRED region.

Ongoing Activities:

Subcontract with a qualified vendor to conduct a census of manufacturers in the 32 WIRED counties that will identify bio-products manufacturers and their training needs: (100% Complete)

The Montana WIRED Manufacturers Survey was completed by the Bureau of Business and Economic Research at the University of Montana. The results show that there are 338 manufacturers in the WIRED region that meet the operational definition of bio-manufacturer. Of these, 84.3% are either sole proprietors or they employ the proprietor and up to four employees. Only 15.7% employ five or more additional workers.

The results are now available at the following link on the MMEC website:

http://www.mtmanufacturingcenter.com/PDFs/MT_WIREDmfgSurvey07.pdf

The WIRED Field Engineer analyzed the survey data. As a part of this process, he divided the WIRED region into 10 sub-regions based upon geographic and economic factors. The field engineer is in the process of visiting each of these sub-regions. During these trips, he is coordinating with and visiting as many of the bio-manufacturers as possible. These visits are helpful in determining the status of each manufacturer and determining if they are actually bio-manufacturers. This provides an opportunity for him to meet these manufacturers and provide them with information regarding the WIRED program as well as the services offered by MMEC and other economic development agencies.

Recruit, hire, house, and provide appropriate training for a dedicated professional FTE (100% Complete)

Recruitment for the WIRED Field Engineer is complete. Training for the Field Engineer during this quarter included:

The field engineer attended the MEP National Conference that was held April 26-30 in Orlando, Florida.

Build relationships with qualified manufacturers in the Montana WIRED region (Ongoing throughout the WIRED grant)

Manufacturers that the field engineer met or worked with this quarter include: Spika Welding, Lewistown: Discussed government contract language and provided a contracts attorney business contact.

Arbuckle Ranch, Alzada: The field engineer is still training on flow visualization testing for the Native Seedster.

Earl Fisher Biofuels, Chester: The field engineer is working to see in what way he can be of assistance for these biodiesel producers to become BQ-9000 certified.

Sidney Sugars, Inc., Sidney: The field engineer met with the new operations manager. They seem interested in getting some of their staff trained. Their needs are various and include boiler training and precision pump alignment. He is now working with Raymond Carlson to develop a training program.

The field engineer also met with the owners or representatives of the following companies and provided them with information about the WIRED program:

Churn Creek LTD, Sidney: Manufactures, soft, chewy granola snacks.

DJB Inc., Sidney: One man custom oak trim and molding manufacturer.

Rau Designs, Sidney: A growing sign and graphics company. With the oil boom they are outgrowing their current facility and need to hire their first employees. If they can be considered a bio-manufacturer, this may be a good opportunity for WIRED training.

Sidney Millwork Company, Inc., Sidney: Cabinet manufacturer. Employment has fallen from over 50 to under 24 due to the oil boom in Richland County. They are also fighting an industry slowdown and a shortage of particle board, but they feel that they will maintain their sales level. This would be an amazing example of doing more with less. This is an efficient, well organized facility and hopefully a possibility for future projects with MMEC.

Richland Yellowstone Manufacturing, Sidney: This company manufactures over 300 different horse tack accessories. They sell their product nationwide, employ about 25 people, and have been in business since 1957. They have very strong wholesaler relationships and do not sell to the public. They are also anything but lean. Possible source for future WIRED training activity.

Robertson Stykbow, Lewistown: Manufacturers high end, custom recurve and long bows. It is a family business with Dick, his wife, and his son participating. His son has moved to Alaska, so production is down. Basically, Dick sells as many bows as he can build. He does about 100 per year by himself. When his son was involved, they did about 200 per year. They sell for around \$1100 each. He does not advertise and turns away business. These bows are impressive – works of art really. They have a custom built sander that needs to be replaced. The WIRED field engineer referred them to a fellow MMEC field engineer who would know the best way to source this type of machine.

Garfield County Feeds, Jordan: Local animal feed blender.

Ryan's Grocery and Processing, Jordan: Full line of groceries, hams, and bacon, custom meat processing. The owner may be interested in some employee training. This company does a lot of custom meat processing, but they also make a variety of smoked and cured meat products for local stores. They have several employees and the owner thought some food safety training might be needed. The field engineer will follow up with them at a later date if we don't hear from them.

RMT Manufacturing, Vida: Manufacture a disk machine that is attached to the mowers that are used on the sides of roads. This machine saves construction companies and road maintenance crews from having to make two passes on a road. They have patented their device and have sold 4 of them, but they are in need of marketing help. The field engineer spoke to the owner at length and suggested that he attend one of the Eureka! Winning Ways seminars. He indicated that he would attend the one in Sidney.

Work with qualified manufacturers to submit applications to the MDOC for WIRED funds:

(Ongoing throughout the WIRED grant)

No applications were made this quarter. The field engineer is ready to assist interested manufacturers. All applications will be routed through the appropriate RDO.

Develop and deliver general and customized new and incumbent worker training to companies in the Montana WIRED region: (Ongoing throughout the WIRED grant)

MMEC is working on the development of Lean Energy training for businesses. Lean Manufacturing is already a traditional MMEC offering and does, in itself, provide for energy savings due to increased production efficiency. However, energy savings is not the primary focus of Lean Manufacturing.

Increases in energy costs are prompting many businesses to find ways to conserve energy. Offering Lean Energy as a stand alone product will be an added tool that MMEC can offer to meet this demand. Although the specific format of this training program is undetermined. One possible approach being considered by MMEC is to offer Lean Energy training in modularized sessions with a total of perhaps 12 modules. These could include such areas as lighting, HVAC, conveyors, motors, compressed air, etc. A company would first be surveyed to determine which areas are applicable and where energy savings could be achieved. Once these focus areas are determined, a training session will be conducted at the business with a module to focus on each of these target areas. These events will be comprised of sessions of information presentation and education followed by execution. One example is to focus on compressed air systems. Many businesses have building-wide compressed air systems and these can account for significant energy consumption. Often these systems are installed and maintained without thought to maximizing efficiency. A training module would be conducted where the employees are first taught the fundamentals of compressed air systems, the benefits of efficient use of compressed air, and the need to eliminate leaks. This is immediately followed by the task of detecting and eliminating leaks. The program would also seek to address inefficient uses of compressed air, inefficient system design, etc. Finding the equivalent of 1/4" in leaks throughout an entire system can save thousands of dollars in electricity per year. It could also prevent the need to add additional compressors.

The modularized concept allows for immediate training and execution focused on the areas needing attention. When this training is developed, it will be available to businesses throughout the WIRED region.

Identify and secure knowledgeable, professional third-party providers, as needed, for development and delivery of training programs: (Ongoing throughout the WIRED grant)

During this quarter, MMEC facilitated third party training events for the following companies:

Cream of the West: One employee of this company attended boiler operator training in Billings.

Powder River Forestry: Two members of this company attended the Biomass '08 Conference in Minneapolis.

Snowy Mountain Coffee: One member of this company attended roast profiling and cupping training in Mill Valley.

Work with WIRED partners to build client driven training partnerships:

(Ongoing throughout the WIRED grant)

The MEP conference in Orlando provided the opportunity for the field engineer to meet with Linda Fowler of MEP to discuss possible opportunities for the MMEC to work on technology transfer and transition in the energy and bioproducts areas. The transfer of new technologies and ideas from universities, agriculture research stations, government labs, and other sources, to manufacturers, producers, and the public marketplace is difficult. The MMEC already has experience with technology transition assistance in the defense sector. We would like to focus on this issue in the energy and bioproducts area. Many of the goals of the WIRED program involve the adoption of new and innovative technologies. Improving the MMEC's ability in this area will be a useful tool for the WIRED initiative.

MMEC is moving forward with its partnership with the DEQ with the biodiesel co-product utilization project that was detailed in the last quarterly report.

The field engineer met with Lyn Red Elk of Fort Peck Community College regarding biodiesel training and provided her with presentation material. MMEC is moving forward with Eureka! Winning Ways sessions and has partnered with the Montana Department of Agriculture to focus on ag-based companies. See below for further information on this program.

Report on progress and provide information required by MDOC: (Ongoing throughout the WIRED grant)

MMEC maintains open communication with all WIRED partners in addition to providing all required MDOC reporting. MMEC provides quarterly status reports to MDOC.

MMEC also provides all necessary forms to training recipients so that they may submit these forms to the Montana Department of Labor & Industry as required by the WIRED grant. This includes WIRED Incumbent Worker Training Forms 1.07 and 2.07.

Provide oversight and administration necessary to support the dedicated resources, including 0.1 FTE of the MMEC Director and Business Manager:
(100% Complete)

The MMEC Director and Business Manager are dedicated 10% to the oversight and administration required by this project.

Stacey Scott, Business Manager, continues to maintain a relationship with the National Institute of Standards and Technology (NIST) regarding the WIRED pilot project. This pilot provides connections to other Federal agencies that will benefit the MT WIRED project.

Steve Holland continues to seek funding to compliment and continue the WIRED project. MMEC has secured funding to allow continued work with bio-products manufacturing (and expand the work beyond training and the 32 counties) for approximately 1.5 years from the completion of MMEC's WIRED funding.

Provide training support personnel including training seminar coordination: (100% Complete)

Recruitment for 0.5 FTE support personnel is complete. August Uhl was hired with an official start date of December 12, 2006.

Track and report on project impacts using the existing NIST MEP and MMEC survey processes: (Ongoing throughout the WIRED grant)

Projects that have been initiated are currently being tracked and will be surveyed one year from completion.

Utilize existing MMEC programs like its biennial manufacturer's "Compete Smart" Conference to be held October 2nd & 3rd, 2008, Lean, ISO, and other courses as a training resource for the Montana WIRED project:
(Ongoing throughout the WIRED grant)

During this quarter, MMEC began to promote the Eureka! Winning Ways (E!WW) program. As detailed in previous quarterly reports, E!WW is a scientific method for developing and selecting winning product ideas for businesses. A series of free informational seminars is being conducted all across Montana. Seminars held in the WIRED region for this quarter included Lewistown and Havre. The Montana Department of Agriculture is partnering with MMEC and providing funds to subsidize the cost of attending a E!WW full training session for qualified agriculture companies.

The promotion of E!WW through seminars and other methods has resulted in several sessions thus far. The first of these E!WW full training sessions with a focus specifically on ag-based companies was held on June 17th in Great Falls. Timeless Foods, Cream of the West, and Montana Specialty Mills participated in this all day event. Each of these companies is either located in or has significant operations in the WIRED region. In addition to teams from each of these companies, representatives from the Montana Department of Agriculture, the Bio-Product Innovation Centers, and MEP were also placed on teams to take

part in the idea generating activities. The interactive idea generating exercises resulted in 59, 66, and 37 ideas for each company, respectively.

At the end of the day of a E!WW session, a voting process by the teams from each company takes place to narrow down these ideas to the top 10 or so ideas. This is then followed by the final selection of the top two ideas for each company. This final step is taken by the owner or executive of that company. These two ideas are carried forward in the E!WW process. They are submitted to Eureka! Ranch for analysis in a proprietary system known as Merwyn. The Merwyn system was created through the reverse engineering of over 4000 successful products. The factors found to have contributed to the success of these products will be applied to the new ideas submitted by the teams. In addition to this systematic analysis, the ideas are also analyzed by three experts. Ultimately, the ideas are given a score and a recommendation is given whether or not to move forward with them. If it is decided to move forward with an idea, a member of the company will be assigned as the “scout” for the project. This person is responsible for leading the project, coordinating the necessary due diligence, and interacting with the various outside partners and parties involved. The first thirty days of this process is the “Trailblazer” period. This is the period where the scout will be working to move the project towards launch. The MMEC field engineer that works with the company will act as a motivator and counsel for the scout at the company. This helps to ensure that ideas move ahead in a quick manner.

MMEC and MEP feel that E!WW is an important project due its potential to increase “top line growth” for Montana companies. The traditional offerings of the MMEC, such as Lean Manufacturing, help companies to become more efficient and to eliminate waste. However, this only focuses on half of the equation. This eliminates costs, but does not explicitly increase sales. It has been recognized that traditional MEP and MMEC offerings make companies more efficient which in turn increases capacity. Without tools to effectively increase sales, there is the potential that this new capacity is left unfilled. E!WW is a new tool that can help to increase sales and fill the capacity created by traditional MMEC projects. This is an especially attractive tool for the WIRED program (with a focus on emerging and leading edge technology) because the training gives companies the tools they need to evaluate, execute, and test new products and markets.

Projected Completion Date

Due to the generous extension from the Montana Department of Commerce, MMEC expects to complete this project October 31, 2009. It is our understanding that a final budget for the extension will be negotiated near the end of 2008.

Information Related to Specific Areas of Interest

-Business development on the tribal nations

-Increased employment of tribal members

-Acre increase in oilseed crop production

-Media visibility: The front page article of the most recent MMEC quarterly newsletter, *Forward Focus*, spotlighted Granrud's Lefse Shack in Opheim. Granrud's has been producing lefse in Opheim since 1977. This small business operates seasonally around the harvest and ranching activities of the community. Opheim is a small town of approximately 85 and the population has been declining. However, Granrud's could sell as much lefse as they could produce and demand for this potato based product is increasing. This need for increased production combined with the lack of availability of additional labor provided an opportunity for MMEC to assist. MMEC helped with the automation of the lefse rolling process and WIRED funds allowed for the training of Lefse Shack employees on automated rolling machines and for the creation of a training manual for the machines. This allowed the Lefse Shack to increase output with the same labor force.

The circulation of *Forward Focus* is currently at 4900.

-Jobs created or retained through workforce training

-Average wage growth

-Pursuing new and innovative bio-product ideas: Arbuckle Ranch: MMEC has been working with Arbuckle Ranch in several capacities on the development of the Native Seedster. As mentioned in previous quarterly reports, this farm implement allows for one-pass harvesting of native grasses including biofuel source crops such as switchgrass. There is an increasing demand for native prairie grass seed. The possibility of these grasses as second a generation biofuel feed stock that can be grown on marginal land is helping push this demand as is the increasing demand for native grass seed in reclamation efforts. However there was no machine that could effectively harvest these grass seeds. Traditional combines were not effective in harvesting and some of the problems encountered included; shattered seed, the native grass leaning away, or the dislodged seed falling to the ground without being drawn into collection. This led the Arbuckle Ranch to begin the development of the Native Seedster. This patented device is affordably priced in the world of farm implements. It is designed to be a "simple low maintenance, durable machine to mount on a common farm tractor of 80 HP or more." This design allows for adjustment of the machine for different grasses and eliminates the need for different implements for each grass type. Sales of this machine are increasing. Recent sales have been to an organization interested in harvesting switchgrass. Additionally, Arbuckle Ranch and their sister company, Native Seedsters, Inc.

have been awarded a Department of Agriculture SBIR grant to modify their Seedster design for use as an oilseed harvester for crops such as camelina.

Some specific work that the WIRED field engineer contributed has been training the company staff on the use of flow-visualization testing with wind tunnel technology. This has allowed for simulation of harvesting different crops and helped to eliminate the need for early stage testing in actual fields of grasses.

Powder River Forestry: The WIRED field engineer has built a relationship with the Southeastern Montana Biomass Task Force. Among this group's goals it to find uses for the smallwood biomass in the region. The Biomass Task Force is in the process of executing a feasibility study on this subject. The group decided they needed to send representatives to the Biomass '08 conference in Minneapolis. WIRED funds were used to send two members of Powder River Forestry to this conference. They were able to learn the latest information on products and the state of the industry and advance the cause of the Biomass Task Force.

Challenges: Lack of mature business in the WIRED region

Sustainable Systems, LLC

\$700,000 WIRED Funds 17:1 Match

Project Description: This oil seed crushing plant is located in Culbertson. The award will be used for direct training of employees in conjunction with a large remodel and equipment upgrade and will provide support to growers. 39 new jobs will be created at above average wage levels resulting in growth of the industry and increase in crops converted or oil seed production.

Ongoing Activities: Sustainable Systems (SS) officially started drawing against the WIRED funding in March of 2007 and a quarterly report was submitted on April 15, 2007. Additional funding requests were made for refinery training and grower training during the second quarter of 2007. Training continued in the refinery during the third quarter and fourth quarter of 2007.

The grantee continues to service their core customers and operate their core bulk vegetable oil sales. They contracted a new crop in May and planting was approximately 50% of normal. They believe this was due in part to competitive crop in the region. However, they do have enough production to service their sales contracts through the end of 2008 and into 2009. They have submitted a pre-application to the USDA, through First Community Bank of Glasgow, MT for a 70% guarantee on financing for the expansion project. The application was accepted and First Community Bank was invited to submit a full application for the USDA guarantee. The full application included a feasibility study and an independent appraisal evaluation the enterprise and asset value after the completion of the solvent plant expansion. The feasibility study is complete and the study verified management's assumptions as well as identified additional consideration to optimize the business opportunity. They believe the loan note

guarantee will be issued in September of 2008 and that funds will be available in October 2008 and that construction will resume thereafter.

While their bulk business remains the core revenue generator for the company, they have grown their branded sales through both their website and at grocery outlets across the state. In addition, they have worked a booth at markets in Missoula as a showcase and outreach mechanism for the Montola branded vegetable oils. They now have both the Montola Safflowers and Montola Sunflowers in a glass bottle, each of which is packaged at the Mission Mountain Food Enterprise Center in Ronan. They have picked up some additional restaurant and retail grocery accounts. They attended the NACUFS conference in Coeur D'Alene, ID and from this event they networked with just about every food service manager and executive chef from colleges and universities in the intermountain west. The networking opportunity exposed the Montola vegetable oils to regional colleges and universities and has set the groundwork for market growth in this segment once they complete the expansion. They have continued to work with the tribal community and establish a potential relationship with A&S Diversified in Poplar, MT.

Upon the close of their financing for the expansion project they will move into recruiting followed by hiring of new employees to operate the solvent plant. This will be one of the many challenges they face in the coming 8 to 12 months. They must have the personnel trained and able to safely operate the expansion 24/7. In terms of training on the installed solvent extraction equipment, they believe their training efforts in the refinery will translate into skilled employees who can fill positions within their new solvent plant.

Progress with the USDA loan note guarantee application has been made, however, the project remains on hold with 60% of the equipment paid for an approximately 1/3 of the equipment delivered. The balance of the equipment has been fabricated and they are working to secure the balance of the funding to complete the equipment purchase and take delivery. They have the foundation and footers installed and while they had hoped to resume construction this spring, it appears that they will resume construction this fall depending on the timing of approval from the AUSDA of a loan note guarantee. This project has been a challenge, however, the results of the feasibility study suggest that they are on the right track and even while they continue to operate at less than optimum efficiencies they are maintaining the business and actually growing their revenues.

They continue to encourage their workforce to advance their knowledge of their operations and train in other departments. Two mill operators started their training in the refinery. The training time in the refinery ranges from three to six months depending on the individual. One of these individuals who started training in the refinery in June 2008 is a member of the Fort Peck Tribe and has progressed from being a mill operator to being a refinery operator. This

particular training is particularly beneficial as they hope that this will encourage the tribal workforce to seek out employment opportunities with Sustainable Systems at the Montola plant. They anticipate that the wage increase and increase responsibilities may stimulate the realization that opportunity exists nearby. Both are adapting well to their new positions and higher level of responsibility.

Challenges: No significant challenges reported

Lake County Community Development Corporation (LCCDC) Mission Mountain Food Enterprise Center

\$49,732 WIRED Funds 1:1 Match

Project Description: The goal is to assist developing food companies in the 32-county region via the Mission Mountain Food Enterprise Center located in Ronan, to ultimately build processing capacity in their communities that produce significant value-added products from Montana agriculture and create living wage jobs that are filled with a trained workforce.

Ongoing Activities: The following summarizes Western Bio-Product Innovation Center project quarterly activities from April 1, 2008 through June 30, 2008:

Consultant has completed the script for the program and has recorded with SKC media contractor. She developed additional interviews for the DVD and finished the booklet for the production which is currently being printed. The grantee has completed their training contract and has drawn their WIRED grant funds. This contract is closed out and no further reporting will occur.

Challenges: No significant challenges reported.

Ethanol Producers and Consumers (EPAC)

\$87,500 WIRED Funds 2:1 Match

Project Description: This non-profit mutual benefit corporation has 150 active members and is located in Nashua. This award will be used to fund a series of workshops to train employees and businesses on providing education, information and referral services to promote the bio-fuel industry resulting in a heightened awareness of biofuel development and E-85 pump installation procedures in the WIRED region.

Ongoing Activities:

- Workshop Preparation and Facilitation of BIODIESEL in Montana Learn the Answers Workshop, June 10, 2008 collaborating with MSU-Northern, Montana Department of Agriculture and DEQ
- Continuing training of new hires
- Conference planning
- Website and e-mail updated and industry information to refute negative media coverage of “biofuels”
- Attendance at the FEW (Fuel Ethanol Workshop) in Nashville

“BIODIESEL in Montana Learn the Answers” An Educational & Training Workshop to Promote the Use of Biofuels” was held Tuesday, June 10th at the

MSU-Northern Applied Technology Center, Havre, Montana. The advertised goals of the workshop were:

1. Use of Biofuels for the Consumer
2. Use of Biofuels and Biodiesel in Business
3. Availability of Biofuels and Biodiesel in Montana
4. Auto & Implement Warranties
5. The Renewable Fuel Standards
6. Environmental Impact of Biodiesel
7. Presentation and tour of the MSU-Northern Biodiesel Certification Lab

This workshop was organized by Ethanol Producers And Consumers (EPAC) with cooperating partners Montana Department of Agriculture and MSU-Northern. The focus of the Workshop was BIODIESEL and Biofuels through presentation and a tour of the working Biodiesel Certification Lab. EPAC worked with Tracey Jette, BioProduct Innovation Center Network Coordinator, Montana Department of Agriculture and Dean Greg Kegel, Dean of the College of Technical Sciences, MSU-Northern.

Speakers included Brett Earl and Logan Fisher, of Earl Fisher Biofuels, Chester, Montana; David Cobb, Senator Max Baucus office; an Auto and Implement Industry Panel with Steve Steinmetz, Havre Ford, Craig Tilleman, Tilleman Motor Company and J.R. Tchida, Moodie Implement Company, a John Deere facility; Brian Spangler of the Montana Department of Environmental Quality; Greg Kegel, Dean of MSU-Northern College of Technical Sciences, and scientists and teachers of MSU-Northern. The attendees represented Havre Public Schools, Rocky Boy Schools, NE MT Workforce Center, Solutions Not Pollutions, Bear Paw Development, Cypress AgriEnergy Inc., Miles Community College, Opportunity Link and individual Agriculture producers and business men and women. The communities represented were Turner, Havre, Box Elder, Glasgow, Chester, Fort Peck, Kremlin, Big Sandy, Nashua, Miles City, Wolf Point and Shaunavon, Saskatchewan. The Workshop attracted statewide media interest, being picked up as stories in The Great Falls Tribune, The Billings Gazette, Northern Ag Network and coverage with representatives from Channel 5, Great Falls, KFBB attending and interviewing several of the speakers of the day. EPAC had the Ethanol car and the FlexFuel Vehicle from the Department of Environmental Quality as well as the EPAC display and materials on-site.

This Workshop provided education for attendees about the biofuel industry in general and Biodiesel specific educational, and employment opportunities. By providing a forum for producers to interact with industry leaders, as well as tour the innovative and only BIODIESEL certification lab in Montana, EPAC continues to provide awareness and education to fuel the continued interest and aid in the development of other biodiesel plants in the WIRED region.

In house training continued with the Executive Director and the Training Coordinator. EPAC developed the Workshop with Tracey Jette and Dean Greg Kegel as conceived from their meeting at the opening of the certification lab in March.

EPAC met with John Munsell from Miles Community College who attended the Havre Workshop for a planning session for the next series of workshops to be conducted in October. EPAC is seeking to collaborate in the third quarter not only with Miles Community College but Dawson Community College in Glendive and the Great Northern Development Corporation to develop a three day, three city educational opportunity focused on an open discussion and forum that speaks to controversy surrounding the production and use of biofuels. The format "All things considered – the pros and cons of biofuels" will bring in state and national speakers representing both sides of the issue to answer and address the questions of the Montana citizen within these WIRED region communities. There will be a plethora of material that will be made available to all attendees and the respective colleges will distribute "biofuel" educational certification information. The timeliness of this information and the impact of rising energy costs on all Montanans make this series of workshops of particular importance.

EPAC will further furnish college libraries of all Colleges within the WIRED region resource publications and materials to add to or help begin their section on "Biofuels". EPAC will furnish the WIRED administration copies of the materials that are to be given to the libraries for approval within and possibly outside the WIRED program areas.

EPAC is in its final planning stages for the 18th Annual Ethanol Conference – Food AND Fuel, July 20-22, 2008, Kalispell, Montana. Sponsors for the Conference are: Abengoa Bioenergy New Technology; Canadian Consulate; CHS; EPIC; Fagen, Inc.; General Motors; KATZEN International Inc.; LECG, Inc.; MT Dept. of Environmental Quality; Montana Wheat & Barley Committee; National biodiesel Board; Northern Broadcasting System; R.J. O'Brien & Associates; USDA Biodiesel Fuel Education Program, USDA Office of Energy Policy & New Uses and the RFA. We have attached an agenda for the conference that outlines the industry leader speakers that EPAC provides at each yearly conference. No WIRED funds are being utilized for this workshop.

EPAC should expend in total its grant funding by the end of October 2008. It is the intention of EPAC at that time to submit an amendment for additional available funding for the next calendar year.

Challenges: No significant challenges reported.

Fort Peck Tribe/Fort Peck Community College (FPCC)
\$50,000 WIRED Funds 4:1 Match

Project Description: This award will be managed by the Fort Peck Community College in Poplar. The funds will be used to train no less than 25 unemployed individuals to be prepared for opportunities in the bio-product related industry within the WIRED region.

Ongoing Activities:

Business Development on the Tribal Nations:

Ten individuals completed roofing certification training. The training took place on a library/ museum in Wolf Point. The 10 individuals are on the Fort Peck Tribes TERO database and will be assisted with their employment goals.

Ten individuals successfully completed concrete finishing training. The 10 individuals are on the Fort Peck Tribe TERO database and will be assisted with their employment goals. The individuals completed work on a skateboard park.

Seven individuals began training in Bio-tile installation. Four individuals successfully completed the training. Training took place at the Community Center in Wolf Point. These four individuals are on the Fort Peck TERO database and will be assisted with their employment goals.

There was and is a great deal of planning and structure that is being established. The curriculums and network will be sustainable far after the program has expired.

Challenges: No significant challenges reported.

Peaks & Prairies, LLC

\$410,000 WIRED Funds 9:1 Match

Project Description: This bio-refinery crushes oil crops grown by members and refines the oils into bio-lubricants. 19.5 new jobs will be created at the end of 2008 and up to 30 new jobs by the end of the project resulting in growth of the industry.

Ongoing Activities:

Within the past quarter, Peaks and Prairies (PP) has focused on the final formulation of the motor oil and getting certified testing underway. In addition, PP has negotiated with investors, repaired and assembled the expeller, installed a seed heating system, and installed a distillation unit. Internal cross – training continued as they have not been able to bring new hires on board.

In April, the plant supervisor, traveled to Chester to train with Brett Earl to reconvene training on the distillation unit. Brett and the plant supervisor distilled enough estolide so that they could mix a new batch of motor oil. The previous motor oil formulation had to be revised due to the discontinuation of certain additives. At this point, the new formulation with the new additives needed to go through preliminary testing before it could be sent to SWRI.

The preliminary testing for the motor oil was finished by May. After reviewing the results, the new formulation proved to have even better properties than the first formulation. The plant manager returned to Chester at the end of May to train

with Brett once more. During this training session, Brett reviewed the new formulation with Mike and reviewed the recent test results. They formulated the new motor oil and prepared the barrel for shipping.

In June, Peaks & Prairies focused on negotiations and strategic planning with their current investment company. On July 9, 2008 the company signed a contract with an investor group.

Peaks & Prairies hired a new employee to train with the plant manager. He will begin his training in July.

Challenges: No significant challenges reported.

Mr. Pipetech, LLC

\$22,200 WIRED Funds 5:1 Match

Project Description: This award will train employees in various aspects of pipe bursting operations. Individuals will be trained in specialized skills to be better prepared to enter the bio-product workforce.

Ongoing Activities: Mr. Pipetech has completed their training requirements and have drawn their funds. Contract is closed. This contract is closed out and no further reporting will occur.

Challenges: No significant challenges reported.

Fort Belknap Indian Community (FBIC)

\$50,000 WIRED Funds 2:1 Match

Project Description: FBIC will provide job training for a workforce in the production of smoked meat products made by their tribal enterprise, the Little River Smoke House. The end resultant goal is a developed smokehouse to produce high end meat products from low end cuts of meat allowing the Tribe to develop a flow of meat products for all cuts of meat.

Ongoing Activities: The WIRED grant for Fort Belknap has been 100% expended as of September 30, 2007. All funds have been used according to the terms of the grant. Three (3) positions have been trained and incorporated into the Little River Smokehouse staff. Ongoing training is required for all staff at the smokehouse for maximum efficiency. Training will be ongoing during their development progress.

The staff has received training in the Little Rockies slaughter/ packing facility as well as the Little River Smokehouse. With funds from the WIRED grant trainers were provided for this purpose.

During the course of this grant, the Little River Smokehouse has received their 90 day grant of inspection from the USDA as well as HACCP certification training for 14 individuals. They will be receiving their 90 day review on their certification within the next month and they are confident they will receive their final approval for USDA certification. All of this was made possible with the assistance of the WIRED program.

They are now able to produce their products under USDA inspection and market nationally. Their next stage of development will be to market their product on a national level and eventually on an international level.

The Fort Belknap grant funds have been drawn and the contract closed.

This contract is closed out and no further reporting will occur.

University of Montana College of Technology

\$572,734 WIRED Funds Less than 1:1 Match

Project Description: The purpose of the grant is to provide start-up funds for a 2-year Associate of Applied Science degree program to train Energy Technicians. After the initial start-up phase the program will be self sustaining and producing trained energy technicians in support of the bio-products industry.

Ongoing Activities:

Student Recruitment

- Fall recruitment and registration underway; currently have 15 new students (1 new student from WIRED region) registered for Fall semester 2008.

Conferences/Workshops/Field Experiences

Program Director

- Participant, Summer Wind Institute, Columbia Gorge Community College, June 24-26. Fifty participants from 19 colleges/universities, 8 wind industry partners (Vestas Americans Corp, PGE, Suzlon Wind Energy Corp, Iberdrola Americas, UpWind Solutions, enXco), four workforce and economic development agencies, and representatives from the American Wind Energy Association.
Agenda included sessions on developing national skill standards for individuals employed as energy technicians. The approach is to build from workforce need toward common program outcomes with the potential of establishing national skill standards. Based on industry needs colleges and universities are entertaining the curriculum and program building possibilities using an identified/standardized set of national skill standards.
- Participant, Sixth Annual Sustainability Tour, June 14, 2008. Tour of buildings in the Bitterroot Valley incorporating energy efficiency and renewable energy technologies.
- Presenter, Careers in Green: It's easy to be green Career Leadership Luncheon, University of Montana, April 9, 2008.
- Participant, Bitterroot Economic Development District meeting, April 28. Discuss development of a sustainable building center. Collaboration sought with UM College of Technology for Energy Technology courses, internships sought from a variety UM College of Technology programs if building center funding is approved

- Steering Committee member, Harvesting Clean Energy conference, Billings 2009; ongoing.
- Task Force member, Global Climate Change minor curriculum development committee; 5 Energy Technology courses included in new minor; The University of Montana, ongoing.

Partnerships

- Montana Tech of the University of Montana College of Technology
- Dawson CC
 - Met with Jim Cargill, President and Jackie Schultz, Dean of Instructional Services, June 4. Dawson Community College dis-obligated from subcontract responsibilities--June 4, 2008
- Miles CC
 - Met with Kristin Gustad (WIRED grants coordinator) and John Munsell (site coordinator), June 3.
- Stone Child College
Program director visited SCC campus June 6.
Partnership begins July 1, 2008
- Blackfeet Community College
Partnership begins July 1, 2008

Outreach/Capacity Building/Media Relations

- Presenter, Fergus High School, Career Fair, Lewistown, Montana, April 8. Hosted four exploratory sessions on renewable energy careers.
- Program Director trip to Eastern Montana, June 2-6. Met with:
 - Barbara Ward, Mgr. HR, and Russell Dunn, Mgr, Equipment and Reliability, PPL, Billings, June 2. Discussed internship opportunities, jobs, and summer practicum experiential learning sites.
 - Jim Atchison, Executive Director, South Eastern Montana Development Corp, Colstrip, Montana, June 2. Discussed collaborative opportunities and ET program.
 - Miles Community College, Miles City, June 3. See partnership section.
 - Nicole Zimmerman, Director, Bioproduct Innovation Center Network, EPRCD, Plevna, Montana, June 3. Discussed ET program, internships, collaborative opportunities.
 - Diamond Willow, Baker, Montana, MDU wind farm, June 3.
 - Dawson CC, Glendive, MT, June 4. See partnership section.
 - Mike Carlson, New Harvest Energy, (formerly of Eastern Plains RC&D), Glendive, Montana, June 4. Discussed Mike's upcoming presentation on wind energy development in Eastern Montana, curriculum, ET program outreach.
 - Dick Iversen Eastern Plains RC&D, Sidney, Montana, June 4. Unable to meet, but Mike Carlson and Nicole Zimmerman will communicate with him providing information about Energy Technology program.
 - Tod Kasten, Regional Development Officer, MT Dept. of Commerce, Circle, Montana, June 4. Discussed ET program, opportunities and

resources in Eastern Montana.

-Gina Snyder, Roosevelt County Extension Agent (MSU), Culbertson, Montana, June 4. ET program outreach.

-Dennis Ketterman, Editor, Alternatives-magazine (WIRED affiliate), Plentywood, Montana, June 4. ET program outreach, collaboration opportunities, internships for students.

-Lorene Hintz, CBA, Small Business Development Center, Director, and Jeanna Adkins, Bio-Products Counselor, Great Northern Dev. Corp, Wolf Point, Montana, June 5. Discussed ET program, possibility of hosting workshops in energy efficiency and renewable energy technologies in Wolf Point and/or Eastern Montana.

-Tom Friese, WIRED Program Case Manager, North Eastern Montana Job Service, Workforce Center, Glasgow, Montana, June 5 (met at Fort Peck Community College Career Fair). Discussed ET program, possibility of offering workshops, etc. in Eastern Montana.

-Walter White Tail Feather, Director, Fort Peck Energy Dept., Poplar, Montana, June 5. Discussed ET program and the possibility of collaboration with tribe for renewable energy projects and training.

-Joe LaPlante, Director, SBDC/Bear Paw Development Corp., Havre, Montana, June 5. Was unable to meet, left program information at office.

-Doug Crebs, Professor (site coordinator for partnership), and Ed Stamper, Foundations and Research Dept., Stone Child College, Box Elder, Montana, June 6. Left program material for distribution..

Collaboration/Networking

- HomeWORD, Melissa Parrott, Operations Manager, and Betsy Hands, Executive Director, May 28. Discussed internship possibilities, jobs, and collaboration on learning experiences.
- CTA, Kyle Huth, ME, May 21. Discussed internship opportunities, summer practicum participation, jobs for program graduates
- Montana Sustainable Building Center. Discussed collaborative learning and educational opportunities.
- MT Tech COT, Steve Lufts, Assistant Dean Department Head Trades and Technical, June 10. Discussed Butte's wind technician program proposal, possible areas of collaboration.
- John Jones, OSHA/MREA/NW Energy, June 17. Discuss summer practicum OSHA component, skills for RE/EE workers, jobs, curriculum development.

Employment/Internships in Energy Sector for program students

- Sam Hall, Director of Operations, Sustainable Building Systems, LLC; Missoula, Montana. Sam was hired out of the program at end of Spring Semester 2008.

Curriculum

- Program in preparation for submission to ASCRC (The University of Montana curriculum review and approval committee and Faculty Senate, Fall 2008. Permanent approval being sought for program and four new courses.
- Investigating student certification of energy efficiency

In response to specific questions

- Increased employment of tribal members: Upon start date of partnership, a site coordinator for each partnered institution will be employed. Opportunities for course development and instruction also exist.
- Media visibility: please see Outreach/Capacity Building/Media Relations
- Jobs created or retained through workforce training: please see Employment/Internships in Energy Sector for program students

Challenges:

- ◆ Difference between WIRED grant reporting dates and academic program/academic year reporting dates (quarter/semester)
- ◆ Students are admitted only two times per academic year
- ◆ One partnership dissolved and two partnerships with tribal colleges beginning July 1, 2008
- ◆ The first time a practicum associated with the program will be offered is July 2008 with second offerings of practicum in June 2009. Numbers of students involved and students and faculty trained will not be available until before that offering

Earl Fisher Bio-Fuels, LLC

\$234,500 WIRED Funds More than 4:1 Match

Project Description: The purpose of the grant is to provide funding to train employees and regional farmers in the benefits of oilseed crops. Earl Fisher's mission is to create economic growth and employment opportunities by building a biodiesel production facility in Chester, Montana. This will create a self sustaining industry in rural north central Montana, by creating a market for oilseed crops that can be grown locally, converted to fuel locally, and consumed locally. By year end, their goal is to have hired 7 new employees.

Ongoing Activities:

Logan Fisher was trained in the biodiesel reaction procedure, biodiesel washing procedure and the biodiesel drying procedure.

Challenges: Increase in the price of raw material has had an impact on the cost of training.

Intercontinental Truck Body (ITB)

\$300,000 WIRED Funds More than 3:1 Match

Project Description: The purpose of the grant is to provide funding to ITB to further train their current employees and approximately 15 new employees in specialized skills that will allow the employees to be better prepared to enter the bio-product workforce.

Ongoing Activities:

High fuel prices, in conjunction with the demise of the construction sector, have resulted in a 30% decline in our traditional business segment. This slow down is likely to either continue, or accelerate, throughout the remainder of 2008. The automotive industry, to which ITB is directly linked, is currently posting some dubious records. Share prices for General Motors, Ford, and Chrysler are near 50 year lows. June automotive sales numbers are expected to set further negative records. Fuel prices are projected to continue rising, and bank credit will contract further as the mortgage crisis forces lenders to come to terms with their losses.

In the face of these difficulties, ITB was not been able to increase their labor force as projected in their original WIRED application. Fortunately, the government business segment increased approximately 38%, and they were able to continue using their surplus traditional labor to manufacture tow trucks and aircraft ramps. This cross-training was completed in the first quarter of 2008, in anticipation of current economic events. ITB's government backlog is of sufficient size to allow them to fully utilize this surplus into first quarter 2009.

ITB does not foresee a rebound in the automotive sector before the second quarter of 2009. As a consequence, they do not believe that it would be wise to hire additional employees to account for the tow truck and aircraft ramp increases while they idle traditional capacity in anticipation of a rebound.

In summary:

- Current government backlog will allow ITB to retain the traditional labor force through first quarter of 2009. WIRED training monies were used in direct support of this job retention effort.
- ITB has submitted the requisite documentation to close out their WIRED contract. ITB extends heartfelt appreciation to all the individuals involved with the acquisition and administration of this funding.

ITB has completed their training and drawn their grant funds. Their contract was closed in June 2008. This contract is closed out and no further reporting will occur.

Challenges: High fuel prices, in conjunction with the demise of the construction sector, have resulted in a 30% decline in our traditional business segment.

New Century Ag

\$25,000 WIRED Funds 32:1 Match

Project Description: The purpose of the grant is to provide funding for the training of new employees in the operation of a proposed grain elevator in Westby, Montana.

Ongoing Activities: Approximately 95% of the work is done at the new office building and approximately 65% is done at the elevator site. They have one employee who is training at both the Fortuna office and the Westby office.

Challenges: No significant challenges reported.

Safflower Technologies International, LLC.

\$73,325 WIRED Funds 4.4:1 Match

Project Description: The purpose of the grant is to provide funding for the training of 8 employees in the operation and maintenance of a seed cleaning and storage facility. Operation located in Fairview.

Ongoing Activities: STI has provided forklift and auger safety training to three employees. Seed cleaning and handling training has occurred. Mike Bergman has provided basic agronomy training to one employee.

An increase of approximately 5000 acres of safflower oilseed crop production in 2008.

One new job was created, to date.

Challenges: No significant challenges reported.

Decker Coal

\$1,526,000 WIRED Funds Near 2:1 Match

Project Description: The purpose of this grant is to provide job training for 165 employees in the mining industry. Operation is located in Decker.

Ongoing Activities: Contracting was done on July 1, 2008. Therefore, no quarter report by this grantee required Q2 2008.

Challenges: No significant challenges reported.

D&M Water Service

\$62,928 WIRED Funds 1:1 Match

Project Description: The purpose of this grant is to provide funding for training for 9 new employees. Training will consist of safety, operation, and maintenance of the equipment (trucks, trailers, forklifts). Operation is located in Baker.

Ongoing Activities: Contracting was done on July 1, 2008. Therefore, no quarter report by this grantee required Q2 2008.

Challenges: No significant challenges reported.

Department of Agriculture

New Projects – Individuals / Businesses Directly Served:**Bear Paw Development Corporation**

- East End Colony

East End Colony is building a fish hatchery to raise freshwater tilapia and market in the local areas. They are working with Todd Hanson as a contractor to assist them with their business plan and financials, and in order to sufficiently run the hatchery, they will need to extend additional power at the colony, and pay for line upgrades. Bear Paw is providing East End with technical assistance as they go through the planning and construction phases of their project.

Beartooth RC&D, Inc.

- On Thyme Gourmet

Bonnie Martinell operates a diversified greenhouse and orchard operation raising fresh fruits, vegetables and seasonings which she successfully markets via trade shows, farmers markets and the internet. We are currently assisting with marketing assistance and promotion.

- 3 Bros. Pizza

The 3 Bros Pizza is a restaurant with a diversified menu that includes pizza, calzones, soups and sandwiches. The owner Greg Smith takes much pride in his in house pizza sauce and has been marketing it on its own for about a year. Work on providing assistance on a marketing plan and developing a relationship with other value added producers in the area that may be able to provide fresh ingredients for the Pizza Sauce.

- Montana Hanna's Restaurant

This restaurant was initially owned and operated by Jack Hanna and for years featured quality entrees with some local ingredients. Since it was purchased by the current owner they have gotten away from using the local products in their menu selection and have at the same time lost some of their market. We have been working on getting local products back on their menu and using that marketing again to increase visitation.

- Montana Hog Marketing Association

The group is made up of hog producers mostly from Hutterite colonies that have had a long standing relationship with a processor in Modesto, California. The owner of the processing facilities has been buying the hogs on the hoof from the organization that meet specifications previously agreed upon. This has been a good relationship for several years and the processor is now looking to locate a processing facility on the Interstate 15 corridor and ship the processed meat not only to California but also to other possible locations. TA is being provided on site selection and business development.

- Sheep Marketing Coop

Coop members from the region including producers from the BPIC region have set up booths at the Reedpoint Sheep Drive featuring various lamb

recipes for sampling by visitors to raise the level of awareness for Lamb. TA is being provided on marketing.

Eastern Plains RC&D Area, Inc.

- Terry Steffen
Terry Steffen from Savage, MT grows three varieties of june berries and will be planting more this spring. Technical assistance is being provided for expansion of the business and marketing of product.

Great Northern Development Corporation

- Elaine Schouhard
Business currently makes lotions and foot cream in the owner's basement. She currently has a limited market around NE Montana. Technical assistance is being provided in marketing and sourcing camelina oil for experimentation in her products.

Snowy Mountain Development Corporation

- Montana Bar-BQ Co
Business currently includes selling barbeque sandwiches, sauces, and salsa at various events around Montana and Wyoming and would like to establish a "brick and mortar" location in Lewistown. Technical assistance is being provided for business expansion.
- LD Construction
Developing, building and operating a 1 – 5 mgw biomass (small diameter waste wood) electrical generation plant. Technical assistance is being provided for business start-up.
- OurMontanaMarketplace.com
Start-up and creation of a cooperative point-of-sale website to support cottage industries in the Lewistown area. Technical assistance is being provided for business start-up as well as identification and "recruitment" of cottage businesses as potential website participants.

On-Going Projects

Beartooth RC&D, Inc.

- Red Lodge Ales
Red Lodge Ales has proven to be an extremely successful value added business located in the town of Red Lodge. The business redeveloped an old feed and seed building in town and has operated their brewery and a popular local tap room out of that location for 8 years. In that time period the business has continued to grow along with their marketing and distribution area. The business has consistently purchased its malted barley for brewing from the malting operation in Great Falls where the barley purchased is guaranteed 100% Montana grown and delivered from counties across the state including those in the BPIC region. The owner is looking to build a new and much larger operation North of Red Lodge. We

have provided technical assistance with a radiant heat system that would utilize solar energy to heat the building. The burning of waste vegetable oil from area restaurants in a boiler will supplement the solar power in the winter. In the summer months the solar power will heat water for the brewing process and the waste vegetable oil will be converted to biodiesel for the brewery fleet. Red Lodge Ales also plans on installing a "Free Air" refrigeration system that exchanges air from outside the building in colder months with air in the cold storage room, reducing electricity used to power a traditional compressor and evaporator.

- **Stillwater Packing**
Stillwater Packing Company of Columbus processes fresh and value-added meat products for customer all across Montana. Many private labels have sprung up across the state because of the owner's talents for recipes and other product development. BPIC-eligible producers utilize the packing services to process meat for their private labels. Technical assistance has been provided to aid in an expansion to the business. Continued assistance will be provided in marketing.
- **MT Bio-Industries Cooperative (MBIC)**
This is a start-up biodiesel production cooperative in SouthEastern Montana. They have been researching Green Diesel rather than the typical biodiesel production. Their project is on hold at this time awaiting passage of the Farm Bill to determine whether blending credits will be made available for green diesel to make this a viable project.
- **Grains of Montana, Inc.**
The Nielson family has farmed for generations near Nashua, MT and recently has created a value added component by utilizing grain grown on the family farm for the baked goods sold in their family restaurant in Billings. The business is planning for growth and has completed the work to begin franchising, three of which have already been sold and are at various levels of completion. Their proposed 10,000 square foot bakery would add high-paying jobs to the Montana economy both in Billings as well as on the farm in Nashua, as it would be the source for all baked goods sold in the franchises. Technical assistance is being provided for business/operations planning, financial, training and other assistance for a value added, farm to consumer grain business.
- **Midland Bull Test**
The Midland Bull Test has been an international seed stock industry leader in marketing as well as providing valuable data through animal production testing. This facility tests and markets animals for beef producers from all across the state and nation including many in the WIRED region. Midland has discovered a cutting edge system to measure feed efficiency in cattle on a large scale and have partnered with Texas A&M University and Montana State University in the collection and storage of daily data on all animals in their facility for further research. The residual feed intake or RFI system utilizes a digital reader and scale

- system in the feed bunks that reads each individual animal's ID when eating and takes weights from the scales under the feed every few seconds. The system records the amount of time each animal is in the feed bunk while constantly recording the changing amount of feed. This allows for a more accurate analysis of the amount of feed it takes each animal to gain a pound of weight (as well as other performance characteristics), thereby giving each animal an efficiency rating. This will revolutionize the seed stock business by giving expense-wary commercial cattlemen the data to select the most efficient bloodlines and potentially better leverage their operation's feed stuffs selecting against animals that eat more and produce less. This is key when considering the high cost of maintaining cattle is in feed (70%+). Technical assistance is being provided in general business management and business expansion activities.
- **Community Food Campaign**
Regional group of value-added producers that have formed around an existing organization to develop a drop point, regular schedule, and process for ordering and delivering locally grown, value-added agricultural products. The group has developed a mailing list and flyer that lists each producer with their products and price lists for ordering. Technical assistance has been provided on business planning, business operations and marketing.
 - **Wood Products Innovations Cluster**
The intent of this project is to form a network of wood processing businesses across the region so that they can work together to promote and build their respective businesses together. We have worked with Elk River Building Products, Beartooth Log Homes, Black Dog Timber Products, Rocky Mountain Compost, Contractor's Equipment Funding, Inc., Blake Nursery, The Wood Lady, Columbus Nursery, and other small business to develop this network of businesses. Many of these businesses have clientele that operate businesses in and around the WIRED region.

Bear Paw Development

- **Native Salsa**
Bara Buffalo-Hide is producing her own family-recipe salsa in the kitchens at Stone Child College. They need to pursue USDA certification to export their salsa to markets out of state, and potentially internationally. They are also seeking assistance with QuickBooks to become more efficient with their books.
- **Earl Fisher Bio Fuels, LLP**
Earl Fisher Bio Fuels is a start-up biodiesel production facility located in Chester. They are leasing a facility from Liberty County and have used the first year of business to install manufacturing and testing equipment. They have begun production of biodiesel by purchasing feedstock oil from surrounding areas as well as having Brett Earl and Logan Fisher's crops

contract crushed for feedstock. They have received technical assistance with a business plan, marketing plan and grant administration.

- **Peaks & Prairies, LLC**
Peaks and Prairies is pursuing funding for development and marketing of a pilot plant model that they can sell as a package to other states, countries, etc. with their patented technology for bio-lubricants. They are in the planning stages of this portion of their project, and have asked for assistance with researching funding opportunities and facilitation of applications.
- **Great Plains, The Camelina Company**
Great Plains has been researching camelina for approximately 12 years, and is interested in constructing a crushing facility and biodiesel refinery in the Havre or Shelby area. They have had a presence in Montana for approximately one year, and have pursued potential locations in Shelby, Judith Gap, Wolf Point, Lewistown, and now Havre. They have indicated that Havre is their preferred choice, as it is located on the BNSF rail system, and is in the general vicinity of the growers they will be contracting with to grow their Camelina. Assistance is being provided on site location.
- **1st Street Project**
Converting an old grain elevator into blending of premium animal feed. Continued conversations regarding environmental concerns with the site. These need to be cleared up before any permanent financing can be obtained.
- **Little River Smokehouse**
Little River Smokehouse is currently having the buffalo they use for their jerky processed at the Meat Packing Plant in Malta. The tribe is considering closing the meat plant due to funding constraints. Bum Stiffarm (manager of the smokehouse) is looking for assistance in the expansion of the smokehouse operations. They would like to pursue USDA certification and begin marketing their products internationally.

Eastern Plains RC&D Area, Inc.

- **Day Spring Aquaculture**
The concept of Day Spring Aquaculture was conceived by Paul B. Jarvis who has more than 20 years experience in the aquaculture industry including work with larval perch culture and perch diet development at the university level. Day Spring Aquaculture will be located in Montana or south Central Idaho, this location has been chosen for a number of reasons such as there is a geothermal water resource, close proximity to a fish feed mill, close proximity to a processing plant, close to a community college with an aquaculture program (skilled labor), and an easy access to several large west coast markets. Business planning assistance is being provided.
- **Farm-to-Table**

Eastern Montana Farm-To-Table Projects is to develop a producer-owned, agriculture marketing cooperative that would operate a shared-use, commercial kitchen; a farm-to-table restaurant; and a regional cooking school for vocational training. Business development assistance is being provided.

Great Northern Development

- **Sylvan Walden**
Currently has a home-based business buying mohair and making custom cinches. She currently makes about 20 cinches per year for family & friends. Technical assistance for business expansion is being provided.
- **A&S Diversified**
This is a tribal enterprise that is in negotiations with Sustainable Systems in Culbertson to purchase vegetable oil and bottle it in a facility on the reservation. Technical assistance is being provided for a feasibility study.
- **Can-India Pulses International LTD / Samyak Global**
Start-up business for pea and lentil processing as well as flour milling. Technical assistance is being provided in business start-up and operations.
- **Sustainable Systems**
Sustainable Systems continues to grow and explore new avenues of adding value to locally grown agricultural products. Earlier oil seed processing utilizing hexane closed the plant. However, modifications have been made that allow efficient processing. A new bottle has been designed and specialty markets explored. Sustainable Systems markets the vegetable oil in four package options. Sustainable is looking into the options of on-site vs. off-site bottling. The facility currently employs 21 individuals and, based on projected growth, is planning to hire and train more. Communication has been occurring throughout this last year. Paul Miller of Sustainable Systems spoke at informative workshops such as the NE Montana AG Conference and a bio-fuels workshop for high school students. Technical assistance has been provided on potential expansion possibilities.
- **Prairie Hills Seed Company**
Brent Hurst and his wife own Prairie Hills Seed Co, a seed cleaning and seed marketing operation. They are interested in getting assistance with marketing. Information on developing a trade show booth was provided to them. They are also pursuing the internet market to market flax for human consumption and also to the equine market.
- **Granruds Lefse Shack**
Existing lefse producer located in Opheim. Technical assistance has been provided for purchase of new equipment to expand the production capacity of the business.

Lake County Community Development Corporation

- **Amy Sibra**

- Development of a value added organic Kamut product. Amy and her husband are working with Bob Quinn to develop an organic roasted Kamut snack product. She requested assistance in facility layout, regulatory compliance and packaging.
- Two Rivers Economic Growth Inc.,
Development of a commercial kitchen. She has requested assistance with plan to develop the facility and the regulatory issues they must comply with. Preliminary discussions have taken place on their facility needs and the regulations they must meet.
 - Irene Whitmere
Start-up business packaging gluten free mixes. She is seeking information on gluten free certification, packaging, and general food processing information.
 - Yellowstone Caviar
Process caviar from paddlefish. They requested assistance in their new plant design and HCAPP training. Technical assistance was provided in the design in the new plant layout, equipment determination and purchasing. BPIC is providing registration fees for two volunteers to attend HCAPP training to be conducted by WSU- Dr. Dougherty.
 - US Omega 3
Camelina processing company approached our center for assistance in the design of a mobile processing unit for camelina. Technical assistance was provided for equipment design and an equipment list for them. We suggested a feasibility study be completed for the unit.
 - Sustainable Systems
Technical assistance has been provided with their specialty oil product labeling, packaging and processing. The specialty oil line consists of sunflower, safflower, and canola oils that are brand labeled for the niche market of consumers wanted to know their food is source verified. The company was also assisted with their kosher certification application and Made in MT Show display.
 - Farm to Table/Prairie Industries
Technical assistance was provided for the cooperative in the labeling and packaging of their dry mix products made from NuBarley and Wheat. We researched bottles for grill sauce, worked with client on display for Made in MT show. The group was provided resources to pay for registration for the HCAPP training held by WSU- Dr. Dougherty. Assistance has been provided with the layout of the Glendive facility and assisted in locating and costing equipment.
 - Timeless Seeds
Timeless was created in 1987 by four organic farmers to market the production from their farms. They now help support dozens of organic family farmers throughout Montana and the surrounding region with new markets for their quality crops. The hallmark of Timeless has been the introduction of unique and highly nutritious specialty grains like our Black Beluga ® Lentils, Purple Prairie ® Barley, and Black Kabuli ® Chickpeas.

While they remain a small, farmer-owned company in rural Montana, our bulk grains are marketed world wide. And their award-winning, 100% organic Timeless Natural Food retail line graces the shelves of quality grocers across America. Technical assistance has been provided in obtaining expansion capital and researching a business management system.

Snowy Mountain Development Corporation

- **Brett's Busy Bees Honey**
Honey production business that is being provided technical assistance with labeling, packaging, and marketing their product.
- **Fergus County Fairgrounds**
Project to upgrade the existing kitchen facility in the Trade Center to be a commercial kitchen, complete with inspected and approved space and equipment. Technical assistance has been provided in the form of a feasibility study and business plan, in addition to layout and design.
- **Autumn Creek Farms**
Project is an organic vegetable farm and delivery service. Provided technical assistance with financial restructure as the client would like to refinance his existing vehicle so it would allow him to purchase a bigger, higher capacity vehicle.
- **Becky's Berries**
Business owner produces, markets, and sells jam, jelly and syrup from wild berries harvested on the family ranch. Technical assistance has been provided in many areas, including labeling, licensing, content description, pricing, cash flow, marketing, and equipment purchase.
- **Stradtman Logging and Lumber**
Tim Stradtman has a logging operation and small sawmill. He has been expanding his operation to include the purchase of land and new sawmill equipment. Technical assistance was provided in the development of a business plan and financing package.
- **Barta Industries**
Randy Barta was looking to manufacture fiber roll and fiber blanket for use in the road construction and building industries to aid in erosion control. These items can be made from certified weed free straw. Technical assistance was provided in the form of a feasibility study and business planning.
- **Gebhardt Post and Pole Plant**
An existing post and pole manufacturer that expanded with the addition of a shaving mill and bagging station. Technical assistance was provided on business planning.
- **Winnett Convenience Center and Campground (proposed name)**
Dave is looking into development of a convenience center to compliment a campground and RV park already in existence. Included in the convenience center would be a meat processing facility, for both domestic animals and wild game. There currently is no processing facility in

Petroleum County and Mr. Harris believes this could provide a service to satisfy a real need for the area. Technical assistance has been provided in the initial look at the project and to begin the process of determining viability.

- North Frontier Foods and Montana Morado Maize
Owner leases a farm/ranch north of Lewistown on which he produces organic corn and other products. He has received technical assistance for marketing his products and in securing trademarks for two companies with which he is involved.
- Bar T Timber and Sawmill, Inc.
Owner is developing an idea to utilize most waste type wood products by running it through chipper, shaver, shredder type equipment to make shavings for livestock, particularly horses. The shavings would be bagged for transport. Technical assistance is being provided on business planning and management.

Office of the Commissioner of Higher Education (OCHE)
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General Activities

Presentations:

- | | | |
|---------|---|-------------|
| 4/20-23 | American Association for Agricultural Education | Reno, NV |
| | "What is all this talk about National Content Standards for Ag Ed?" | |
| 5/14-18 | National Career Cluster Institute | Atlanta, GA |
| | "Agricultural Education Content Standards" | |
| | "Developing Careers in the Biofuel Industry" | |

Attended:

- | | | |
|----------|--|----------------|
| 4/1-3 | National Association State Directors of Career & Technical Education consortium Spring Meeting | Washington, DC |
| 4/30-5/2 | WIRED Academy | Boston, MA |

Leadership to the National Ag Ed Content Standards Project. The Ag Industry validation is completed and cross-walking with National Math, Science, Language Arts, and Social Studies Content Standards is currently being addressed. Project scheduled to be completed by September 1, 2008

Lead to the National Agriculture, Food, and Natural Resources Career Cluster. The Biotechnology Pathway for the Agriculture, Food and Natural Resources Career Clusters in its initial draft. The National FFA Foundation has allocated \$90,000 to complete the project by March 15, 2009.

Miles Community College

It has been a quite few weeks for MCC – with both of our staff members out part of the time on leave. John Munsell traveled to Moccasin for the Research Center field and provided a demonstration at the center. Fifty three people participated in the demonstration. John also attended the AERO field tours in Big Sandy and Stanford.

We have refilled the WIRED Entrepreneurship Education position. Kassie Taylor will be coordinating the distance education part of our WIRED grant. Kassie started On June 19th and is performing the final step in placing the Entrepreneurship class online.

Kassie was raised in Miles City and graduated from Powder River County High School in Broadus, MT. From there she attended Dickinson State University and went on to graduate from Black Hills State University in Spearfish, SD with a Bachelor of Science Degree in Education, Social Science Composite. She has been back in Miles City for the last 12 years and has spent the last 7 ½ years working at First Interstate Bank as the Mortgage Lender.

Her email is taylork@milescc.edu phone number is 874-6199. She will be coordinating our ITV and online classes for fall. If you have any distance classes for this fall with the Entrepreneurship, please contact her.

I hope all is well and I look forward to getting the shared classes going and will hopefully make it to the other campuses with Kassie at some point so people can put a face with the name.

(4 onsite visits made to MCC)

Montana State University –Northern

Prepared by Jessica Windy Boy, Director

The Bio-Energy Innovation and Testing Center has seen huge growth in the development of our Bio-Energy Testing Project. Over the year the Testing Center has begun comprehensive testing of fuel additives on large Class Eight Diesel Engines. Student education is incorporated in this testing through the following:

- Rebuilding Test Engines
- Failure Analysis/Wear Analysis
- Oil Analysis
- Assisting in performance testing

Students are also taught about testing procedures and the value of engine dynamometer and chassis dynamometer testing as diagnostic tool. The diesel

and automotive programs have also added biofuels education to the following classes:

- Automotive/Diesel and Hybrid Vehicles—ATDI 220
- Auto/Diesel Electrical/Electronic Systems III—ATDI 384
- Dynamometer Testing and Computer Systems Data—Auto 450
- Introduction to Diesel Engines—Dies 104
- Introduction to Diesel Fuel Systems—Diesel 115
- Diesel Engine Diagnosis and Repair—Diesel 262 & Diesel 272
- Fuels and Lubricants---TSCI 304

MSU-Northern plans to add an additional 100 level class fall 2009 entitled “Biodiesel Processing.” The class will teach student how to make biodiesel and the fundamentals of working in a commercial biodiesel operation. MSU-Northern has received additional funding through the Montana Department of Agriculture and NorthWestern Energy to purchase a biodiesel processor. This processor is a scaled down pilot plant size processor and includes all the controls of a large biodiesel plant. MSU-Northern plans on conducting workshops for the community as well as creating a class for students. The processor will also be used for testing and training in our existing diesel classes and activities of the Bio-Energy Innovation and Testing Center.

The Bio-Energy Innovation and Testing Center has expanded its capacity by adding a Fuels Chemistry Lab and a Small Engine Test Cell. Both of these projects were started last fiscal year and have been completed in this fiscal year. An open house for the new Fuels Chemistry Lab was held in March 28, 2008. The event was widely attending and included speakers such as the Governor of Montana, Deputy Director for Montana Department of Agriculture as well as a Vice President for Peter Kiewit Construction and of the 25X25 Collaboration. Over 150 community members attended the event.

The small Engine Test Cell has also been finished. The test cell is able to test gasoline and diesel small engines up to 12 horsepower. Small engine testing is valuable during product development to test an unproven product on a disposal engine versus a \$40,000 engine. It will also be used for student projects as a small engine is more economical for testing in comparison to large engine in terms of fuel usage.

The Testing Center was able to make two large purchases to assist in implementing the program. A Detroit Diesel 60 Series, Tier IV Engine was purchase in February of 2008. The engine was on order since FY 2007, however due to EPA Air Quality Regulations had to be specially shipped with all the “after-burn” air quality systems. This meant that the engine to be shipped like it was going into an engine with the catalytic converter, muffler, radiator, etc. The engine was specially built for MSU-Northern. The Testing Center plans to use this engine for testing the effects of 100% biodiesel on the emission system.

They will also investigate operability problems. Since the introduction of the new Tier IV engines in 2007, many operators have complained about reduced power and the emissions system plugging up. Also, this new engine has not been durability testing with 100% biodiesel. Students will be trained on how to troubleshoot problems with the new engine.

The Testing Center also purchased a 2003 Kenworth T800 Semi-tractor for use with the chassis dynamometers. The truck is equipped with a CAT C-15 engine, Tier III. Students will be trained on how the emission system and how to retrofit Tier III engine with Tier IV emissions systems. Also, students will be trained in troubleshooting operability problems using B100 and B20 biodiesel blends.

MSU-Northern has engaged in mentorship/partnership with another WIRED Recipient in the Arkansas Delta Project, Mid-South Community College located in West Memphis, Arkansas. Mid-South is located in a transportation hub with over 10 large distribution center such as Walmart, Fed-X, and Swift. The Industry is in need of diesel techs with training in biofuels. They are modeling their program after Northern's Diesel 2-year program as well as the Testing Center. MSU-Northern will mentor Mid-South with curriculum development, staff training and develop and Testing Center set up and configuration.

Outreach and Public Education remain a central component of the Testing Center activities. The Testing Center recently purchased a large display with private funding to take to tradeshow, conferences and events to highlight the Testing Center activities. MSU-Northern Recruiting Office is using the Testing Center to market the College of Technical Sciences programs which include Diesel/Automotive, Business, Welding, Civil Engineering, Electrical as well as several other programs. Tours of the facility and making presentations at conferences are important to the development of the biofuels industry in Montana as well as complimenting training efforts by other WIRED recipients.

The Bio-Energy Innovation and Testing Center conducted planning in January to develop a pathway for becoming a National Center for Bio-Energy. It was agreed that the first step is to become a Center within the University System, The following step is to become a Regional Center of Excellence for Bio-Energy Development with the last step becoming a National Center. A strategic plan was developed as well as an operation plan to meet this goal.

MSU-Northern has accomplished many of the goals and activities outlined for the 2nd phase of the project. The Testing Center is a key component in the Montana Agro-Energy Plan. The next phase of the project will focus on educational program development and implementation.

Public Outreach/Awareness Building

Presentation at Conferences

- American Oil and Chemist Society—Seattle, WA May 23, 2008
- Board of Regents—May 27, 2008
- Senator Baucus Research Summit—Bozeman, MT June 2, 2008,
- Farmers Union Strategic Planning Meeting—Great Falls, MT June 10, 2008
- EPAC Biodiesel Consumer Education—MSU-Northern---June 10, 2008

Tours of labs

- DOL Workforce Innovation Montana Conference
- MSU-Northern Biodiesel Certification Lab Open House
- Tour for Senator Tester and Staff
- High School Students (Junior and Senior levels)
 - Wolf Point
 - Ft. Benton (two separate bus load of kids)
 - Geraldine
 - Anaconda
 - Simms
 - Glacier High School
- Various members from community and surrounding areas

Education

- 2-year degree program progress
- Re-writing Fuels and Lube Class
- Diesel mechanics program
- Summer Welding Class (Job Service/MSUN Collaboration)
- Collaboration with Mid-South Community College (2-year Training College)

Staff Development

- ICP training
- Agricultural conferences/Oilseed education

Promotion/Educational Materials

- Development of Website
- Brochure (Biodiesel Testing Basics)
- Informational Posters (Biodiesel basics, Wear Metals, ASTM 6751)

Testing/Laboratory

- Completion of Biodiesel Certification Laboratory
- Small Engine Test Cell Completed
- Acquisition of biodiesel processor (grant funding from two different sources)

Industry Linkages

- Earl Fisher Biofuels—Chester, MT
- Peaks and Prairies—Malta, MT
- Cam-A-Lina Fuel Additives—Bozeman, MT
- Foundation Coal West—Gillette, WY
- Safer Technologies—Ft. Benton, MT

- Big Sky Environmental Products—Missoula, MT
- Fuel Products International—Paris, France
- NorthWestern Energy Inc.—Butte, MT
- Hill County Co-Op—Havre, MT
- Allied Bio-Energies—Great Falls, MT
- The Camelina Company—Havre, MT
- E-Box Inc.—Great Falls, MT
- Sustainable Systems—Culbertson, MT
- Havre Chamber of Commerce, Have, MT

Activities Report

Chemical Analysis Laboratory

The Testing Center has been actively engaged in researching, purchasing and setting up the new chemical analysis laboratory that will be the home of the new Biodiesel ASTM certification laboratory. Although the Testing Center received the funding through outside state funds, staff had to research all the necessary requirements and instrumentations for certifying biodiesel fuel. Upon developing a complete list of instrumentation, staff then had to work with MSU-Bozeman purchasing office to determine which instrument had to be put out for bid. All the instruments have been put out to bid and the Testing Center is now receiving the new instruments and other materials that are necessary for the chemical analysis laboratory. It is estimated that the laboratory will be completed in February of 2008.

To compliment the WIRED program, staff is engaged in developing a two-year training curriculum utilizing the fuel certification instruments. The goal of the program will be to train students in operations and analysis of sophisticated laboratory equipment necessary for the production and utilization of biodiesel. Students will be able to receive training on instruments such as gas chromatography, infrared spectroscopy, and inductively coupled plasma. Most students are not able to receive training on this type advanced instrumentation until entering a graduate program. Another advantage that this training program will have is cross training for diesel technology majors. Diesel students will receive hands on lab training as part of the fuels and lube class that is a requirement for both the two year and four year diesel technology program.

Performance Laboratory

The Testing Center has recently added a 2007 Detroit Diesel 60 engines for training through the WIRED grant. The Center faced many challenges in acquiring the engine due to new emissions requirements and then state procurement laws. The Center is still in the process of procuring a used Class 8 diesel truck for use with the chassis dyno.

The small engine test cell is currently under construction and looks to be finished in the next quarter. The staff has designed a four engine test cell for small engine. Currently, staff is fabricating the table and equipment and will soon be machining all the additional parts. When students return for spring semester, students will assist in the assembling and piloting of the test cell as a special student project.

Testing Services

Peaks & Prairie Bio-Lubricants—The Testing Center has finished one round of testing for Peaks & Prairie on their new bio-lubricant product. This test provides several training opportunities for Northern's students. The test was performed on a small engine test cell that our staff designed and built. As a class project for the advance electronic engineering program, several students are working with staff to design, build and program a data acquisition program for the small engine test cell. Once finished, the data acquisition system will be able to record torque, rpm, fuel temperature, cylinder head temperature, emissions, fuel consumption and ambient temperature for two to four small engines running at the same time.

Staff also trained four board members of Peaks and Prairie on the testing protocols and procedures that were used during the initial test. The researcher instructed the four board members on the molecular changes that were experienced by the bio-lube during test and the implications that these changes could have on the operation and wear of the small engine.

Cam-A-Lina Fuel Enhancement Inc.—The testing center has been subcontracted by MSU-Bozeman to perform engine benchmark testing for Clyde Ritter's Cam-A-Lina fuel enhancement product. The project will include engine benchmark testing utilizing an engine dynamometer, as well as chemical analysis of the product. In the spring, the Testing Center will also be conducting a small fleet test in partnership with the Havre School District School Bus Garage. The product is derived from Cam-a-lina. Future plans for this company is to locate and establish production of the product in Havre, MT. The testing center will begin the engine benchmark testing in January after classes begin. It is estimated that 15 to 20 additional new students will be trained as part of this testing.

Condensator Inc.—Company located in Libby, MT that has been making and selling an engine enhancement product for over five years. The company has not had any engine benchmark testing, but several fleet tests have been performed. The Montana State Department of Agriculture and the MT state Dept. of Environmental Quality requested that the Testing center test the product and provide an analysis. The staff will be performing this test in January and February. There is additional equipment that staff will have to make because the product only works on unleaded engines. Although our chassis dyno can run any

vehicle, our fuel consumption analyzer is only for diesel fuel. Staff must build a fuel consumption device for this test.

Environmental Fuel Solutions Inc.---Company requested the Testing Service to perform emissions and fuel consumption testing with the chassis dyno. The company has an engine enhancement product that is already installed on their trucks. This was the first test that the testing center staff has performed without the assistance of MSU-N diesel program staff. The testing did not go well for several reasons. Firstly, the client only wanted to test for one day. The set up of the equipment takes no less than half a day and sometimes a full day. I was not aware of the time required for set up. The client's truck did not perform. There seems to be a problem with cruise control which is required to run a test. There were some safety and control issues that were obvious during this testing. It was apparent that I will need to rewrite safety and procedures protocol and that my staff needs additional training. By getting our own truck to use on the chassis dyno, many of these concerns can be addressed. We can do testing of engine enhancement equipment with our own truck, and know that the truck is performing well. The client wants to bring the truck back and retest in the future. The Testing Center is looking at getting some diesel student interns to help with testing for the spring semester. This will help staff greatly.

Training Activities

ICP Training—MSU-Northern conducted ICP training for Peaks and Prairie in collaboration with Leeman Lab Inc. out of New Hampshire. This training was necessary for the Testing Center staff as well as Peaks and Prairie staff for the operation, sample prep, and analysis of result for the ICP machine. The Testing Center staff was also training on maintenance and troubleshooting of the ICP. There were four participants that were trained during this 1 day, eight hour training.

Chassis Dynamometer training—Several of the advanced diesel technology classes use the chassis dynamometer for training as part of the course. Since the beginning of the semester, approximately 42 students have been trained on power train tests, troubleshooting engine failure utilizing a chassis dynamometer, and effects of fuel consumption utilizing different fuel additives.

Presentations

Presentations to Community—Dean Kegel and the Testing Center staff have conducted 18 tours and presentations to the outside community of the test facility and the importance of the bio-energy industry to the economy of North Central and Eastern Montana. Approximately 85 community members have been given tours of the facility.

Presentation to Montana Agriculture Board of Directors—Dr. Soriano and Jessica traveled to Billings, MT to present to the Montana Agricultural Board of Directors. The presentation focused on abilities of the Testing Center and a request for

additional investment for equipment and supplies. There were about twenty participants.

K-12 Outreach

Science Fair Student Collaboration—The Testing Center staff is working with a 16-year old student from Hinsdale on Science Fair project regarding the possibility of making biodiesel from the used bio-lubricant that Peaks and Prairie is developing. The lead research scientist has exchanged several emails with the student and his science teacher, as well as conducted one four hour one-on-one session. It is estimated that the researcher will spend at least two more one-on-one sessions working with the student and his advisor.

Meeting with Havre High Senior and Junior High Superintendents. Dean Kegel and Director of the Bio-Energy Innovation Center conducted a meeting with Havre High and Junior High Superintendents to discuss strategies to penetrate the Havre High School student to encourage careers in the Bio-energy field and related occupations. It was agreed that we will schedule field trips to the Testing Center in the spring and work with career counselors on identifying potential students to feed into Northern's program. Testing Center staff will also work with the science teachers in the junior high to strengthen the bio-energy curriculum for the junior high students.

Industry Collaboration

The Testing Center staff is continually building strong relationships with regional bio-energy companies. Some of the collaboration includes looking for funding to support research to move renewable bio-energy technology closer to commercialization. Also, the Testing Center and MSU-Northern is positioned to provide valuable training to companies employees.

Allied Bio-Energies LLC. MSU-N is developing a training plan for Allied Bio-Energies upon ground breaking of their Bio-diesel plant just south of Havre. Potential number of workers trained is 45 to 50 new employees.

Peaks and Prairies—MSU-N is providing training to employees on analysis and interpretation of testing results from testing conducted on small engine test cell.

Cam-A-Lina Fuel Additive—MSU-N is collaborating with MSU-Bozeman to conduct engine performance testing for the fuel additive product. After initial testing is develop, next stage of development may lead to a new business development in Havre, MT.

Earl Fisher Bio-Fuels—MSU-N continues to provide technical assistance to the processing engineering of Montana's first commercial bio-diesel plant.

N-C Quest—Company looking collaborate with testing center to develop engine technology.

Condensator Inc.—MSU-N is testing their product for the State of Montana. If the product shows fuel efficiency, the State of Montana will be contracting for the state motor pool.

Grants

The Testing Center is continually working on acquiring new funding to expand the program. The Center recently applied and received a Montana Growth Through Agriculture grant for \$48,000 to purchase a biodiesel processor and for supplies to perform some research on biodiesel produced from Montana grown oilseeds. The processor will also be used for training. The Testing Center has sent a goal of 50 students training with the equipment per semester. WIRED FUNDING WAS USED AS A MATCH FOR THE GRANT.

(6 onsite visits to MSUN)

Fort Peck Community College

Prepared by Carrie Archdale, WIRED-MAP Director

Priority Component 1: Develop educational materials that will assist entrepreneurs in developing bio-energy ventures.

Priority Component 1 is complete. Educational guides have been produced on the following subjects and are available at the MSU Agricultural Marketing Policy Center:

Federal and State Tax Incentives
Bio-Energy Technologies, Costs, and Opportunities
Historical Prices: Energy and Oilseeds
Oilseed Processing Technologies, Cost, and Opportunities
Farm Policy Implications

Priority Component 2: Provide entrepreneurship training sessions for potential entrepreneurs, producer industry groups and community leaders in the WIRED region.

Priority Component 2 is near completion with the exception of one workshop which will be held in August 2008. Biofuel Production Workshops for Entrepreneurs and Industry Leaders were held in the following locations: Glendive, Miles City, Poplar, Fort Belknap, Havre, Rocky Boy, Lewistown, Choteau, Fort Benton, Malta, Little Bighorn College, and Chief Dull Knife College.

One Biofuels: Boom of Bust seminar was held in Bozeman.

Priority Component 3: Provide entrepreneurship training sessions for potential small scale wind energy producers in the WIRED region.

Priority 3 will be completed in year three of the proposal.

Dawson Community College

Prepared by Bruce Bainbridge, DCC

The summer camp went well. We had the welding students teach the bio-diesel students how to do basic welds, and the bio-diesel students gave demonstrations and discussions on chemistry, bio-diesel production and lab safety. We made and demonstrated a Hilsch tube and a rattle back, along with other demonstrations, both of which opened student's eyes to a wider world of science and research.

The welding participants worked on large pipe, stainless steel and aluminum.

The student responses were great. The instructors were quite pleased with the accomplishments made in such a short period of time.

The demonstration bio-reactor should be running this week. It is in a gooseneck, and will be taken to various venues this fall.

The welding simulators order is in process.

(3 onsite visits to DCC)

(4 onsite visits to MSUB-COT)

Montana Department of Labor & Industry: Workforce Services Division (DLI/WSD)
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General Grant Information:

Workforce Services Division WIRED consultants participated in the following grant activities to provide information on the WIRED Program or to discuss training options related to the agro-energy occupations:

- a. The Billings area WIRED consultant traveled to Crow Agency with the local DVOP. He is interested in providing regular outreach services to veterans on the Crow reservation, and asked for assistance in making contact with the tribe. He was introduced to Elizabeth Old Chief, a

- veteran's representative for the tribe. WIRED training opportunities had been introduced to her previously and our WIRED consultant thought she would be a good partner for introducing Veterans to the WIRED program. The following month our WIRED consultant returned to visit with Elizabeth and the TERO director, Wesley Falls Down. During the visit, the DVOP was offered a desk in the TERO office to assist with veterans who want and need occupational training in WIRED related occupations.
- b. In May the Billings area WIRED consultant attended the Governor's Workforce Conference and provided WIRED information to several attendees. At the conference, he visited with Cedric Black Eagle, Crow Tribe Vice-Chairman and discussed WIRED and the positive impact it is having on the Crow Reservation.
 - c. Information provided to a group of 12 people in Glasgow regarding WIRED related occupational training in Glasgow.
 - d. SAGE truck driving training graduation presentation to graduates and guests in Glasgow.
 - e. Presentations with information on the WIRED program provided to the following entities/organizations:
 1. Employers
 - a. On site On The Job Training visits
 - b. Contractors – ATech Builders, Besel Construction, Weeden Construction, Casino Creek Concrete, Miller Construction
 - c. R&D Heating and Cooling
 - d. Edgewood Building Supplies
 - e. Moodie Implements
 - f. Blaine County Road Crew
 2. Educators
 - a. Havre High School trades classes
 - b. Montana State University Northern, Havre
 - c. Dawson Community College
 - d. Montana State University – Bozeman Extension Service
 - e. Montana State University Northern instructors
 - f. Montana State University Northern Business office
 - g. Montana State University financial Aide office
 - h. Montana State University Admissions office
 - i. Stone Child College
 - j. Fort Belknap College

- k. Butte College of Technology
 - l. Miles Community College
 - m. Central Montana Education Center
 - n. Sage Technical Services – Billings program and Missoula program
3. Tribal Programs
 - a. Fort Belknap Employment and Training
 - b. Chippewa Cree Employment and training
 - c. Chippewa Cree
 4. Department of Agriculture
 5. Department of Commerce
 6. Probation and Parole
 7. Jobs for Montana Graduates
 8. Local BEAR Team
 9. Snowy Mountain Economic Development Corporation
 10. Action for Eastern Montana
 11. Job Service Employer Committee members
 12. Educational Opportunities for Central Montana, Inc.
 13. Human Resource Development Corporations

Activities:

In June a two-week course on heavy equipment operation was coordinated in Crow Agency. Dan Archer, the director of the heavy equipment operator program at Miles Community College, taught the course. The Crow Tribe supplied the classroom space and the machinery. WIRED funds were used to pay for participant's tuition and safety equipment. Twenty-two participants learned the basics of operating heavy equipment including things like how to work safely around equipment, how to care for equipment, and how to read grade stakes. As part of the training, students were required to operate the equipment at a job site. At the conclusion of the training, tribal chairman Carl Venne awarded certificates of completion to all twenty-two participants.

Two other training courses were coordinated at Crow Agency in June for an additional twenty participants. The topic of these trainings was industrial safety. It included an 8-hour Construction Safety Training Orientation Program (CSTOP) and a 4-hour course on First Aid and CPR. CSTOP is designed to provide contractor employees with a better than basic understanding of hazards and safety procedures associated with work in highly hazardous work areas. The First

Aid/CPR training emphasized emergency first aid in an industrial setting. WIRED funds were used to pay for tuition and certification costs for both courses.

In addition a WIRED consultant worked with the Crow TERO director to assist six people that wanted to attend service rig training at the Northwest North Dakota Workforce Training Center in Williston. Five of the six participants successfully completed the training and obtained certificates.

Eleven individuals went through cement training to obtain skills needed for securing wind mills for a new wind farm being developed in the Cut Bank area. In addition, a coordination effort is underway with Patrick Blackweasel at TERO, as he has a contractor coming in July or August to do some work on Sherburne Dam that requires cement workers.

SAGE Technical Services provided truck driver training resulting in successful completion for 15 people in Cut Bank. The training contract provides placement services until all individuals completing training have obtained work. SAGE Course TTD 80 held in Glasgow. Nine participants completed the SAGE course with a certificate of completion and passed the CDL Class A exam. Truck driver training was also held in Sidney. In addition, classroom training will be provided at Stone Child College with the driving portion done in Havre in September or October.

Montana Peaks provided training for 14 people in Bobcat and Forklift and Hazmat. Attending the graduation were regional representatives including Hank Hudson from OPA, Clifford Kicking Woman with Blackfeet Manpower, and Anna Sorrell Whiting, from the Governor Schweitzer's office with all expressing their appreciation for training provided by the WIRED program.

A WIRED Consultant training was held in Helena with a focus on recording proper data to collect Common Measures.

An information booth on WIRED Program was coordinated for the Fort Peck Tribes Job Fair in Poplar.

Three individuals from Havre are enrolled in Montana Tech Lineman School for the fall of 2008 session.

A meeting was held with Dr. Ashley Preston, Program Director, Energy Technology Program, University of Montana, College of Technology and Jeanna Adkins, Great Northern Development Corp., about the WIRED Program and possibly utilizing WIRED grants for the Energy Technology program. Various options available to the students were discussed such as taking the course electronically, on campus in Missoula or through Miles Community College.

A WIRED consultant attended the Bio-Diesel Conference at Montana State University, Northern in Havre. The Conference was sponsored by EPAC (Ethanol Producers and Consumers) and provided updated information on the

bio-diesel industry to include a tour of the Bio-diesel Research facility at Northern.

The WIRED consultant in Northeast Montana attended the proposed Keystone XL Pipeline Project public meeting held in Glasgow. The meeting was one in a series of public meetings required prior to approval and construction of the proposed pipeline.

Continue to collaborate with Dawson Community College to develop more bio-fuel related training.

WIRED consultants from Havre met with Earl Fisher Bio Diesel in Chester when doing outreach to the Chester area. They were given a full tour of facility and checked in on 3 On the Job training participants.

Section I Welding course was taught at Montana State University, Northern in Havre. Ten individuals successfully completed the program.

Section II Welding class will be taught on campus at Montana State University, Northern in Havre in August. One challenge has been coordinating transportation for participants from the Rocky Boy Reservation. Talk is underway with Stone Child College and the Chippewa Cree Tribe to request the use of one of their vans to provide transportation between the Rocky Boy Reservation and Montana State University, Northern.

Various meetings were held to work toward more short term training including: coordinated Ag curriculum with Dawson Community College for practicum and local need; coordinated information with Dawson County High School principal and guidance counselors; and coordinated efforts ongoing to build short-term training programs at Dawson Community College.

In Miles City, the WIRED consultant collaborated with the Career Development Workforce Center and Sage Technical Services to provide Flagger training.

Challenges to Project Progress:

It remains a challenge to find appropriate, affordable short-term vocational training; especially short term energy/bio related training that can be delivered locally. To help remedy this, the WIRED consultant in Billings worked with training providers to deliver heavy equipment training, CSTOP training and CPR/First Aid training in Crow Agency. A second part of this challenge is getting industry to recognize the value of short-term training.

Finding appropriate local training continues to be a challenge. Most participants do not want to travel for training due to the cost of travel and time missed from work.

The people who complete truck driver training have been quite successful in obtaining employment. Most are working in construction, oil fields and in other industries to gain the necessary experience.

A common pattern we are seeing with tribal members is that they complete their training course, obtain a job working off the reservation, work for a short time, and then quit to return to the reservation where there are no jobs available.

Blackfeet Housing put in for a RHED grant and they are looking at short-term training in Heavy Equipment and Truck driving. They want to make the training mobile which could help the people all over the state, as well as those in the WIRED region.

One of the challenging aspects of the job recently has been the lack of availability of prospective trainees in the last month or so. I have written it off to the time of year but will continue to search out prospects for WIRED training.

With our first section of Welding currently in session at MSU Northern, our biggest barrier has been to get participants to show up for the class and stay enrolled. On Friday, July 11, all 15 participants were confirmed & expressed they would be at class on Monday, July 14 at 8 am. Come Monday morning, 5 did not show up for class. When we contacted them (the ones we could make contact with) 3 expressed transportation issues that they had not mentioned on Friday. Both of the other 2 had left town over the weekend and we have not been able to locate them. Then, one of the people in the class had such an incredible issue with eyesight that she could not see the flame to weld or the line to cut. We are helping her get her eyes tested & seeing about glasses. She will then meet with the instructor to see if it has made enough of a difference for her to be in the next session of Welding.

Agri-business Students (15) have been delayed in receiving their certificates of completion due to an illness of the instructor at the college. Instructor has assured me that all will pass their courses and be awarded their certificates some time this summer. Normally, they should have graduated in early May. This is also a setback for the forming of a potential co-op for oilseed production, but the education they received should provide for a significant increase of oilseed production acres in my area in 2009.

Promising Innovative Processes and Success Stories:

In June twenty-two people completed a two-week course on heavy equipment operation in Crow Agency. Dan Archer, the director of the heavy equipment operator program at Miles Community College, taught the course. The Crow Tribe supplied the classroom space and the machinery.

In June twenty people attended two courses on industrial safety. One was an 8-hour Construction Safety Training Orientation Program (CSTOP). The other was a 4-hour course on First Aid and CPR.

We coordinated with the Crow TERO to send six people to service rig training in North Dakota.

The demand for training continues to be very high. Some people who contact me were referred by partner agencies such as the Human Resource Development Councils, some were referred through tribal offices such as the Crow Tribal Education Department or TERO office, but most contact me because they heard about the program from a friend or relative.

We worked with the Union on cement training. Eleven individuals were trained in concrete techniques. Techniques were practiced and skills honed by pouring concrete in Browning on the Blackfeet Indian reservation.

Forklift and Bobcat training was held in Browning for Tribal TANF participants who will be working on a Brownfield district near Browning.

We had one person that was not working and struggling to find a job. We placed her in the WIRED program and sent her to heavy equipment training in Wyoming. She completed the training and is now working and earning a starting wage of \$13.00 per hour. Her employer is going to help her obtain her CDL and after 6 months has promised a raise.

One participant that went through the WIRED program and received his CDL he is now hauling lumber for sawmills.

We recently negotiated an On the Job training opportunity for a 2008 graduate from Poplar High School as a heavy equipment operator with Miller Construction Services in Sidney. The trainee went directly from high school to the OJT. The trainee was very instrumental in developing the OJT and after 1 month in training both employer and trainee report all is going well. Miller Construction does oil well site development and maintenance work in the Sidney, MT area.

A disabled WIRED participant successfully completed an OJT and the employer is VERY satisfied. The participant is legally deaf and cannot speak. With the help of a communication "board", the employer and participant were able to communicate making the training successful. The participant already received an increase in wages and the employer is extremely satisfied with the progress of the participant.

A WIRED participant had been recently released from WATCH East (alcohol addiction facility), started engineering tech training at Dawson Community College with WIRED assistance, worked full-time during school, raising a family with 3 children – all while maintaining a 3.97 GPA last year. He recently received the prestigious Dawson Community College/Montana Space Grant Fellowship Scholarship for 2008-2009. The honor reflects his past achievements and future commitment to sciences and engineering.

SAGE Truck driving training students were very successful in completing the training and most are working in WIRED related occupations, averaging \$18.00 to \$20.00 per hour.

Co-enrollment and coordination between Vocational Rehabilitation and the WIRED program have assisted 6 individuals with training and supportive services to begin their careers in energy related occupations.

Montana State University, Northern partnered with the WIRED Program to provide welding classes.

SAGE Technical Services is going to conduct a CDL class beginning on September 8 at Stone Child College. The classroom part will be done at Stone Child & the driving part will be done in Havre. That has been a great collaboration with Peggy Aquino at Stone Child College.

We enrolled one participant from the adult probation department & his parole officer contacted Bev for more information. He felt so strongly that this was a good thing for our mutual client he wrote a letter to the college stating he supported this individual's efforts & recommended his placement into the class. After the participant started the class, Bev emailed that parole office with information about section II of welding and the SAGE class info to inquire about other possible participants. He sent that info on to all parole officers in the area. We have a great working relationship.

The average income of persons completing training for the first year of the program should increase by 50% to 100% from 2007 to 2008. Estimated additional income for participants in 2009 compared to 2007/2008 in my area of responsibility should exceed \$1 million dollars due to WIRED training completed.

In Lewistown 90% of all participants receiving training in Heavy Equipment are employed in that field which should double their income over last year.

In Lewistown 100% of all heavy truck driving training participants obtained employment in their new occupation within 30 days of training completion, with the exception of one who was injured in a car accident. After recovery, that person was immediately employed. One participant already had a Class A CDL with no endorsements. By training to get his endorsements only, that person was hired full time with the Fergus County Road Department due to his endorsements.

Upcoming Activities/Capacity Building:

We are working on welding training in Browning with TERO and the union in August or September. It is a 160-hour training, which includes 40 hours of blue print reading.

We have two pending training agreements, one for truck driver training in Billings and the other for the Welder Course at Dawson Community College in Glendive.

A meeting is planned with Dawson Community College administrators and instructors to discuss short-term training opportunities.

Welding training is scheduled in August at Montana State University Northern in Havre.

SAGE Technical Services Professional Truck Driver training and a CDL Tractor Trailer driving courses are scheduled in August and September.

We will attend The Energy Open in Colstrip on August 14, 2008.

Montana Department of Environmental Quality

DEQ received funding in late March, 2008, and was able to start agreements with other agencies and participants in May. The late start was difficult to schedule trainers and locations for the summer quarter.

A. *Biofuels for School Districts:*

DEQ has had preliminary discussions with School District Board members of Chester and Havre to participate in this project. More details will be developed next quarter as specific needs and training are determined and additional locations added. DEQ has made plans to discuss this and other programs with other schools next quarter, and attend and present at the school administrators conference in the last quarter of this calendar year.

DEQ has been working with the Northwest Biofuels Association (NWBA) Director Nikola Davidson to bring their mechanics for biodiesel training to Montana for these and other fleet mechanics, fleet managers, and fuel suppliers. Training dates are being investigated for the fourth quarter of 2008 and first and second quarters of 2009. DEQ is also discussing and reviewing with NWBA possible training materials on biodiesel and for biodiesel fleet staff use.

B. *Technical and Training Assistance for WIRED-Region Colleges and Universities*

DEQ had preliminary conversations with speakers and location coordinators for the Train the Trainer workshops and their follow-up efficiency workshops. Tentative times for the first of these workshops had been set for September 4 and 5, but a conflict arose with the primary presenter. Train the Trainer: DEQ met with and is processing an agreement with MSU-Northern for analysis of products and co-products for the Train the Trainer workshops. A draft work scope for the updating of the Bioenergy permitting guide has been initiated, but the workshops are a priority at this time.

Plans were made to formalize the MSU-Northern agreement in July during the National 25x'25 Executive Board Quarterly Meeting in Havre, Montana.

C. Training, Data Development and Approvals for Biodiesel Co-products in Alternate Markets

DEQ let a training agreement with Montana Manufacturing Center to train students in analysis of potential regional and local uses of co-products of biodiesel. The assumptions were verified at a meeting May 28 during hands-on small scale biodiesel training at the Rocking Z Ranch. Twenty three others attended the training.

D. Training for Industrial Users

DEQ has continued to discuss with Stillwater Mining and other underground mining operations regarding training needs.

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Matrix – See attached document