Reinvest in Minnesota—Clean Energy Program Guidelines and Standards

A WORKING LANDS CONSERVATION PROGRAM FOR GROWING NATIVE PERENNIAL CROPS FOR BIOENERGY

A Report to the Minnesota Legislature

2007 Minnesota Statutes, Section 103F.518
Reinvest in Minnesota Clean Energy Program

Submitted by the Board of Water and Soil Resources
January 23, 2008

EXECUTIVE SUMMARY

The 2007 Minnesota Legislative Session directed the Minnesota Board of Water and Soil Resources (BWSR) to establish and administer a Reinvest in Minnesota (RIM) clean energy program. The RIM-clean energy program would be in addition to the already established RIM program. The primary intent of the program is to support native perennial biofuels production with secondary environmental and conservation benefits, including water quality, soil health, reduction of chemical inputs, soil carbon storage, biodiversity and wildlife habitat. As such, RIM-clean energy is not a traditional conservation easement program. It is designed to be a new and innovative "working lands" easement program.

A RIM-clean energy program is one component of a suite of initiatives that promotes a cellulosic biofuels industry in Minnesota from which many could benefit. Landowners and farmers would benefit economically from a RIM-clean energy easement program and from their independent contracts with bioenergy facilities; bioenergy facility owners and operators would benefit from an increased supply of native perennial biofuel feedstock; and citizens of the State of Minnesota would benefit from improved water quality and soil health, increased wildlife habitat, and the aesthetic value of the lands placed in easement.

BWSR appointed a technical review committee to ensure the RIM-clean energy program easement agreements would provide public benefits commensurate with public investment. Representatives from the sixteen entities identified in the legislation plus additional stakeholders including landowner/farmer representatives, conservation improvement agencies, and representatives from the biofuels industry participated on the technical review committee. The technical review committee developed a process to designate defined project areas and a tiered payment system for easements.

PROCESS TO DESIGNATE PROJECT AREAS

The intention of designating defined project areas is to ensure that acres included in a RIM-clean energy program have a demonstrable impact on impaired waters and other natural resource goals, and that they are clustered in close enough proximity to provide native perennial biofuel feedstock for bioenergy industry development.

The recommended competitive allocation process, using a request for proposals, is designed to focus program funding on areas that show the greatest potential for successful development of energy markets, enrollment of landowners/farmers, and that provide the greatest potential environmental and conservation benefits. Applications for project area selection will be evaluated based on some or all of the following criteria: 1) viable market(s) for biomass fuel or feedstock; 2) measurable impact on environmental and conservation public benefits; 3) likelihood of project success; 4) on-going monitoring and evaluation plan; and 5) project area diversity.

TIERED PAYMENT SYSTEM

The tiered payment system is structured to encourage landowners to grow native perennial plants, both herbaceous and woody, on lands that are well suited for environmental and conservation benefits and for bioenergy crop production. The tiered payment system is designed to ensure public payments are commensurate with public benefits, landowners and local program administrators can easily understand the system, and the highest per-acre payment compensates the greatest diversity of native species.

The base-level payment for planting one native perennial grass or native woody species would be 80% of estimated market value (EMV). As more native perennial or woody species are planted, payment rates would increase. Payment rate would also increase for plantings that address specific local environmental

benefits, such as planting on flood-prone land. The highest payment is reserved for plantings with the greatest number of native perennial species (greater than 15 species).

This report represents the initial steps necessary to establish and administer a RIM-clean energy program, recommended by the technical review committee. The Board of Water and Soil Resources will develop program guidance, promote the program, select project areas, and work with local Soil and Water Conservation Districts and other organizations determined by the BWSR board to implement this new easement program.

ACKNOWLEDGEMENTS

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SUMMARY OF LEGISLATION

Section 103F.518 of 2007 Minnesota State Statutes establishes a Reinvest in Minnesota (RIM) clean energy program, which charges the Board of Water and Soil Resources (BWSR) to acquire easements of at least 20 years on lands for growing native perennial bioenergy crops. Establishment of a RIM-clean energy program is accomplished with required consultation from a BWSR-appointed technical review committee and technical support from the University of Minnesota.

SECTION 103F.518 DICTATES:

1. RIM-clean energy will enroll privately owned land in targeted areas of the state to be used for bioenergy crop production. Selection of land must be based on its potential benefits for bioenergy crop production, water quality, soil health, reduction of chemical inputs, soil carbon storage, biodiversity, and wildlife habitat.
2. Designated project areas prioritize areas that include coordinated cooperation of a cellulosic biofuel facility or bioenergy production facility, target impaired waters, or support existing state or local natural resource objectives.
3. Development of a tiered payment system for RIM-clean energy easements, partially based on the benefits of the bioenergy crop production for water quality, soil health, reduction in chemical inputs, soil carbon storage, biodiversity and wildlife habitat. The highest per-acre payment must be for diverse native prairie and perennials. Planting of annual crops is not allowed.
4. Establishment of easements, which may be of permanent or of limited duration. An easement of limited duration may not be acquired if it is for a period of less than 20 years.

Harvest Timing: Section 103F.518 also dictates that harvest of native, perennial bioenergy crops on a RIM-clean energy easement must occur outside of bird nesting season (generally identified as April 15 to August 1), thereby implicitly limiting the sale of harvested grasses to intended bioenergy production, rather than to other applications such as haying or bedding.

Provision to Graze: An easement may allow grazing of livestock under an approved plan that protects water quality, wildlife habitat, and biodiversity.

Eligible Land: To be eligible for enrollment in a RIM-clean energy easement, land must not currently be enrolled in another federal or state government program, but may have been set aside in another program prior to the date of application. Thus, land expiring from the Conservation Reserve Program would be eligible to maintain perennial grass plantings, and roll into a RIM-clean energy easement. A parcel of eligible land must be at least 5 acres in size and must have been owned by the landowner or a blood relative of the landowner for at least one year before the date of application.

The full legislation citation can be found in Appendix A: Legislation Citation.

BACKGROUND AND CONTEXT

BIOFUEL INDUSTRY DEVELOPMENT

The biofuel industry has grown to a scale that now has a tremendous impact upon the agricultural landscape. Until 2005, however, biofuel and bioenergy development was a relatively small-scale endeavor within the broader economy. Though significant locally, ethanol plants had minimal or no impact on the price of either fuel or agricultural commodities.

Over the last few years, several key factors changed the biofuels landscape. First, the United States Congress passed the long debated Energy Policy Act of 2005, which established a mandate for refiners to eventually use 7.5 billion gallons of renewable fuels, principally ethanol. Second, failing to secure liability waivers for the oxygenate MTBE, the refining industry made a huge shift toward ethanol as an additive in "reformulated" gasoline. Finally, Hurricanes Katrina and Rita damaged much of the petroleum and natural gas infrastructure, leading to a significant spike in prices. The hurricanes seemed also to shift the public debate about climate change and opened a much more dynamic discussion about future carbon constraints on the U.S. and global economies.

Corn-based ethanol, however, was not the only bioenergy development to recently advance. During this same time frame, a new technology—cellulosic ethanol—was making its way from labs into commercial development companies and attracting investment by venture capitalists. Cellulosic ethanol is increasingly seen as a potential competitive energy technology, but not likely to be commercially viable in the near future. As of the beginning of 2008, multiple pilot projects have been announced and awarded federal funding across the nation.

Cellulosic materials can produce forms of renewable energy other than ethanol. Across Minnesota, processes to convert perennial cellulosic materials to synthetic natural gas have attracted local investors. This syngas can be utilized for electricity production, reformed to pipeline quality natural gas, as well as converted to a host of products/fuels such as methanol, butenol, proponal, synthetic diesel, chemicals and bio-derivatives. The private and public sectors are developing new technologies, including pyrolysis and a host of depolymerization processes such as catalytic pressureless depolymerization. In addition, combustion technologies that use perennial cellulosic materials to directly produce electricity are being developed.

Markets and policy have moved investment toward bioenergy in other energy sectors as well. Natural gas prices have risen dramatically, causing interest to build in replacement fuels, including biomass. The market has grown for pellet and corn burning stoves and furnaces that can reduce the high cost of heating homes. On a larger scale, several industrial plants, including three ethanol plants in Minnesota, have invested in new boilers and technology to reduce or eliminate the use of high cost natural gas. Electric power utilities are looking at a variety of biomass options to help meet Minnesota's Renewable Electricity Standard that requires 25% of all electricity sold in Minnesota by 2020 to be generated by renewable resources. Power plants have been built to burn urban yard waste, turkey manure, and forestry residue.

Several key organizations and policy makers looked at natural gas substitution as the first and most viable large-scale market for biomass outside of the traditional forest products industry. The RIM-clean energy program was proposed as part of a legislative package that would accelerate the development of these incremental bioenergy markets and create the steps needed to eventually ensure the development of a cellulosic biofuels industry.

The Ethanol Boom

Prior to 2005, biofuel development was largely the domain of traditional agricultural players – large grain millers and small farmer cooperatives. These investors had faith, took risks, and saw project development fitting into their larger business plans. State and federal subsidies also played a vital role in developing a biofuels industry. Beginning in 2005, the market was no longer seen as high risk and limited in scale. Investment capital began to rapidly flow into corn ethanol production facilities. National capacity grew from 3.6 billion gallons at the start of 2005 to 7.2 billion gallons by the end of 2007. Fears grew in 2007 that the ethanol boom had outrun the market and that softening prices marked the beginning of an ethanol bust. However, in December 2007, the United States Congress passed a new Energy Bill and increased the Renewable Fuel Standard (RFS) from 7.5 billion gallons to 36 billion gallons by 2022.

The new RFS is broken into several categories, limiting corn ethanol to 15 billion gallons, other conventional biofuels (such as biodiesel and other grain starch) to 5 billion gallons and providing a market for cellulosic ethanol that will ramp up to 16 billion gallons starting in 2012. Clearly, the energy market will capture a significant portion of the nation's agricultural capacity. As a result, it is likely that land and commodity prices will remain robust, as energy markets place heavy demands upon agricultural markets.

Biomass Direction

The ultimate source of cellulose for cellulosic ethanol and other bioenergy projects has not been determined. Corn stover (stalks and leaves) is widely identified as the most abundant and available cellulosic biomass. Corn stover may not be the most sustainable crop, and other high yielding perennial energy crops have been suggested. The most actively discussed are short rotation woody crops, and agronomically improved strains of switch grass and other prairie grass species. Conservation concerns recommend native plant communities as a win-win solution.

Ultimately, policy has the greatest impact on the direction of bioenergy development in the state. The federal farm bill has an enormous effect on the planting choices that farmers make. The safety net provisions of the farm program provide risk management and price supports that reinforce major commodity production. The farm programs were extensively debated in anticipation of a major rewrite in 2007. While both the House and Senate have passed separate farm bills, they did not meet the October 2007 deadline and have extended the current farm program until March 2008 to allow the chambers to reconcile the two bills. Although it appears that there will be biomass production incentives in the new program, the basic framework of the 2002 farm bill is likely to be extended. In light of the current market situation, traditional grain production will remain very profitable, benefiting from substantial risk protection. It is not clear to what degree perennial biomass will be competitive under this farm bill and market environment.

Climate and Carbon

As previously noted, policy initiatives to slow global climate change have been gaining traction since around 2005. In 2007, the Minnesota Legislature and Governor adopted very aggressive goals for carbon dioxide emission reductions – an 80% reduction of CO_2 emissions from 1990 levels by 2050. This is comparable to eliminating all the coal and petroleum used to meet state energy needs. Accomplishing this enormous task will, if seriously pursued, require a host of strategies. Such strategies will include unprecedented levels of energy efficiency, deployment of a wide range of renewable energy resources, and "carbon sequestration" (the long-term storage of carbon dioxide in soil, living plants, or even in deep geological features). Converting land from annual crops to native perennial energy crops is a strategy that will provide carbon neutral fuels, capture carbon in soil, and contribute to improved water quality.

Minnesota's Bioenergy Market

More than thirty (30) bioenergy facilities in Minnesota are currently using cellulosic fuel (wood waste, agricultural residue, or other biofuel) to produce heat and power, and at least twenty (20) more facilities have been proposed or are under development.[1]

[1] "Land of Biofuels," Minnesota Conservation Volunteer, Jan/Feb 2008, pp. 19-20

Table 1. Minnesota Bioenergy Projects (operational, under development, or proposed) as of January 1, 2008

Facility	City	Status	Scale	Unit	Fuel	Description
Fibromin	Benson	Existing	75,000	tons/year	Manure/ Dry Biomass	Power Plant
CMEC Gasification	Little Falls	Existing	102,200	tons/year	Wood	Ethanol - Boiler
CMEC/SunOpta Cellulosic	Little Falls	Announced	150,000	tons/year	Wood	Cellulosic Ethanol
District Energy	St. Paul	Existing	300,000	tons/year	Wood	CHP Plant
Verso Paper	Sartell	Existing	Large		Wood	Industrial CHP Plant
CVEC - Phase 1	Benson	Construction Started	18,250	tons/year	Wood/Herbaceous/ Stover	Industrial Steam / CHP
CVEC - Phase 2	Benson	Announced	109,500	tons/year		Industrial Steam
U of MN	Morris	Construction Started	9,000	tons/year	Herbaceous	Steam Plant
Koda Energy	Shakopee	Construction Started	175,000	tons/year	Herbaceous	Industrial CHP Plant
NUPUC	New Elm	Announced/ Design	7,300	tons/year	Herbaceous	CHP Plant
Rock Tenn	St. Paul	Potential	300,000	tons/year	Wood	Industrial CHP Plant
Madelia / Tony Downs	Madelia	Announced	175,000	tons/year	Herbaceous	Industrial CHP Plant
Sunrise Agra Fuels	Bird Island	Announced			Herbaceous	Biomass Pellets
MN Valley Alfalfa Producers	Priam	Existing	40,000	tons/year	Herbaceous	Biomass Pellets
Rural Energy Marketing	Luverne	Announced			Herbaceous/Stover	Evolving - Commodity Nat. Gas
Pork and Plants	Altura	Construction Started	1,000	tons/year	Herbaceous	Pellet Furnace
Eagle Bluff ELC	Lanesboro	Announced	500	tons/year	Herbaceous	Pellet Furnace
Chisago County Cellulosic		Potential			Herbaceous/Wood	Cellulosic Ethanol
White Earth Cellulosic		Potential			Herbaceous/Wood	Cellulosic Ethanol
Bois Forte Band Cellulosic		Potential			Wood	Cellulosic Ethanol
Northern Excellence Seed	Williams	Existing	1,000	tons/year	Herbaceous	Commercial CHP
Roseau	Roseau	Possible	4,000	tons/year	Herbaceous/ Seed Residue	Commercial CHP

STAKEHOLDER GROUPS

Development and implementation of a RIM-clean energy easement program would benefit several key stakeholder groups. Minnesota's landowners and farmers have the potential to benefit greatly from economic opportunities provided through the RIM-clean energy easement program and through independent contracts with existing and emerging bioenergy facilities. Bioenergy facility owners and operators could benefit greatly from the increased supply of bioenergy feedstock provided by a RIM-clean energy easement program. Finally, citizens of the State of Minnesota, having demonstrated their commitment to protecting Minnesota's natural resources by investing public funding in conservation initiatives such as RIM-clean energy, would benefit from the increased native perennial cover on Minnesota's landscape. Benefits of native perennial plantings, in particular when land that is in row crop production is converted to native perennial cover, include improved water quality and soil health, increased wildlife habitat, opportunities for recreational use, and aesthetic value.

SUMMARY OF RIM-CLEAN ENERGY PROGRAM DEVELOPMENT PROCESS

Introduction to Process

The Board of Water and Soil Resources (BWSR) was charged to develop a RIM-clean energy program with required consultation from a BWSR-appointed technical review committee and technical support from the University of Minnesota. The BWSR Administrative Advisory Committee endorsed a two-phased approach to developing the RIM-clean energy program. The technical and policy aspects of the proposed program were separated into two phases. The University of Minnesota led the technical efforts in Phase 1. BWSR selected the Minnesota Environmental Initiative (MEI) to coordinate and facilitate the policy discussion and communicate the recommended program guidelines and standards.

Technical Review Committee

Section 103F.518 dictates that a BWSR-appointed technical review committee must recommend program guidelines and standards to ensure that RIM-clean energy provides public benefits commensurate with public investments.

The statute requires BWSR to appoint sixteen (16) individuals to the technical committee that must be made up of one representative from each of the following organizations: Department of Agriculture, Department of Natural Resources, Department of Commerce, Pollution Control Agency, two farm organizations, one sustainable agriculture farmer organization, three rural economic development organizations, three environmental organizations, and three conservation or wildlife organizations. BWSR expanded the required list of representative stakeholders to include thirty-three (33) individuals representing thirty-two (32) organizations. Additional stakeholders invited to participate in the technical committee include landowner/farmer representatives, conservation improvement agencies, and representatives from the biofuel industry private sector.

Table 2 lists the agencies and organizations represented by the members of the technical review committee.

Table 2. Technical Review Committee Member Agencies and Organizations

Organization	Category	Statutory Requirement
Minnesota Department of Agriculture	State agency	X
Minnesota Department of Natural Resources	State agency	X
Minnesota Department of Commerce	State agency	X
Minnesota Pollution Control Agency	State agency	X
Minnesota Board of Water and Soil Resources	State agency	X
Minnesota Farm Bureau	Farm organization	X
Minnesota Farmers Union	Farm organization	X
Land Stewardship Project	Sustainable agriculture farmer organization	X
Agri-Growth Council	Rural economic development organization	X
Agricultural Utilization Research Institute (AURI)	Rural research and development organization	X
Minnesota Association of Cooperatives	Rural economic development organization	X
Institute for Agriculture and Trade Policy	Environmental organization	X
Minnesota Environmental Partnership	Environmental organization	X
Izaak Walton League	Environmental organization	X
The Nature Conservancy	Conservation or wildlife organization	X
Pheasants Forever	Conservation or wildlife organization	X
Ducks Unlimited	Conservation or wildlife organization	X
Center for Energy and the Environment	Non-profit	
Great Plains Institute	Non-profit	
Minnesota Association of Watershed Districts	Non-profit	
Minnesota Association of Soil and Water Conservation Districts	Non-profit	
Minnesota Project	Non-profit	
Minnesota Waterfowl Association	Non-profit	
Rural Advantage	Non-profit	
U.S. Fish and Wildlife Service	Federal agency	
U.S. Department of Agriculture, Farm Service Agency	Federal agency	
U.S. Department of Agriculture, Natural Resource Conservation Service	Federal agency	
Dakota County Farmland and Natural Areas Program	Local government	
Yellow Medicine SWCD	Local government	
Chippewa Valley Ethanol	Private sector	
Rahr Malting	Private sector	
Dovre Farms	Landowner/farmer	
Minnesota Forest Resources Council	Public-private partnership	
University of Minnesota	Educational institution	

In September 2007, the BWSR-appointed technical review committee began planning a strategy to establish the RIM-clean energy program. The technical review committee held four daylong full-group meetings between September 11, 2007 and January 10, 2008 to develop recommendations for the RIM-clean energy program elements and pricing structure. In addition, work groups made up of self-selected members of the technical review committee held interim meetings between full-group meetings to develop recommendations regarding the land management practices, project area selection process, and tiered payment structure for RIM-clean energy.

The Minnesota Environmental Initiative

The Minnesota Environmental Initiative (MEI) contracted with the Board of Water and Soil Resources and was responsible for the design, management, and facilitation of the policy discussion, including the review and critique of the technical aspects of the program. MEI staff scheduled and convened meetings of the technical review committee, kept meeting minutes, compiled stakeholder input, and worked with the technical review committee to prepare the final report and recommended RIM-clean energy program. Meetings of the technical review committee were moderated and facilitated by Ron Nargang, contracted with MEI to serve as chair of the technical review committee.

University of Minnesota

The University of Minnesota's Center for Integrated Natural Resources and Agricultural Management is a key partner in developing the RIM-clean energy program. Some of the University's ongoing activities are related to the RIM-clean energy objectives, and University of Minnesota faculty and staff were charged with delivering three components of the program:

1. Developing administrative procedures, including a contract structure and management practice guidelines;
2. Creating an adjustable soils-based price schedule that reflects land market values and other factors, including web-based access to full soils and RIM-clean energy pricing data;
3. Proposing easement programs that reduce landowner risk and enhance public benefits over time.

As part of developing administrative procedures for RIM-clean energy, including a contract structure, researchers from the University of Minnesota conducted five (5) focus groups with farmers and landowners around the state of Minnesota. Focus groups were conducted in Lanesboro, St. James, Thief River Falls, Mahnomen, and Jordan, and ranged in size from 6 to 12 people, lasting an average duration of 90 minutes. A full report of the outcomes from the focus groups can be found in Appendix C. Results from the work of the University of Minnesota will be used by BWSR, but are not included as part of this report.

RIM-CLEAN ENERGY PROGRAM ELEMENTS

DESIGNATION OF PROJECT AREAS

Rationale for Project Area Selection

The RIM-clean energy statute provides for the designation of project areas. The goal behind the statutory language is to ensure that the acres enrolled in the RIM-clean energy program are clustered in a close enough proximity to support a supply for biomass industry development, and to have a demonstrable impact on impaired waters or other natural resource goals. The size of a project area is not specified in the statute.

Selection of Project Areas: Competitive Allocation

The statute does not specify projects or project areas, nor methods for selecting project areas. The Board of Water and Soil Resources is therefore charged with developing its own methods for project area selection. Project area selection could proceed based on several different approaches including:

- Open enrollment
- Open enrollment within a specified radius of identified or selected bioenergy markets
- Expert technical analysis to determine project areas that would optimize public benefits, such as water quality or wildlife habitat
- Competitive allocation of acres through a "request for proposals" process

Open enrollment is the method used in the traditional RIM-Reserve easement program, but would not be consistent with the statutory requirement that the project area selection process for RIM-clean energy prioritize project areas based on a level of cooperation of a cellulosic biofuel or bioenergy production facility.

The proposal for a competitive allocation process targeting areas in proximity to an energy facility was put forth at the first meeting of the RIM-clean energy technical review committee, and was generally accepted. The goal of a proposal-based award system is that project areas will be defined with a focus on successful development of markets for and supplies of native energy crops, as well as focusing the program funding in targeted areas that show the greatest potential for achieving public benefits in accordance with the statutory guidelines.

Thus, proposals must indicate a level of engagement and involvement by an existing or emerging energy market, and demonstrate the potential benefits for water quality, soil health, reduction of chemical inputs, soil carbon storage, biodiversity, and wildlife habitat. The framework for a competitive allocation project area selection process is subsequently outlined.

Proposed Project Area: Site and Scale

The statute directs the Board of Water and Soil Resources to establish project areas that are aimed at improving water quality in impaired watersheds. The statute is not specific regarding the scale of watershed, nor does it specifically require project areas to conform to watershed boundaries. A 50-mile haul radius is the generally accepted upper bound of economic transport of biomass for energy purposes. Project areas can include small targeted areas to support smaller scale commercial or community energy projects as well as projects seeking to include land within a 50-mile maximum economic haul radius.

Eligible Project Area Applicant

A project area proposal may be developed and submitted by any organization with capacity to lead a program of outreach to landowners, including but not limited to an energy facility, a private company involved with land management or logistics management, private landowners, a local unit of government, a college or university, a state agency, or a not-for-profit

organization (such as a watershed initiative, a wildlife organization, a farm organization, a community development organization, or an environmental organization).

Application Requirements

Applications should demonstrate the existence of viable markets for cellulosic bioenergy, consistency between the biomass feedstock required by target markets and the project plans for establishment, potential to improve water quality within impaired watersheds, potential to support other public benefits as described in the statute, and the partnerships and capacities required for successful landowner outreach and participation. Additionally, the technical review committee recommends that project area applications explicitly describe the geographic boundaries of the proposed project area and include relevant maps. The project area application should also outline timelines for outreach, recruitment, establishment, and market demand. Applicants should identify an ongoing monitoring and evaluation plan to track environmental or natural resource benefits and agronomic outcomes for a given project area, and identify lands within the project area that are currently enrolled in or recently retired from an existing conservation program, including retirement dates on contracts.

Ranking and Selection of Project Area Applicants

The Board of Water and Soil Resources would be responsible for ranking and selecting project area applications based on basic criteria. Members of the technical review committee have developed a list of potential selection criteria, and recommends that the following attributes be given greatest weight when ranking project area applicants. BWSR may choose to select project area applicants that demonstrate some or all of these criteria. A sample Project Area Application form is included in Appendix B: Draft Project Area Application. A completed application would constitute a project area proposal and provide BWSR with the needed information to rank and select project areas based on relevant criteria, such as those listed below.

1) Viable Market(s) for Biomass Fuel or Feedstock

- Preference should be given to projects that demonstrate cooperation with a bioenergy facility that is in-place, under construction, or in an advanced development stage.
- Project area proposals should demonstrate that easements would result in the development of a suitable and viable biomass fuel or feedstock supply relative to the project market(s) (i.e., type and quantity of biofuel needed).
- The efficiency of energy generation at an affiliated bioenergy facility could also be considered when ranking project area proposals.
- A project area proposal linked to a bioenergy facility with the capacity to use multiple feedstocks may be prioritized highly, as market flexibility could provide opportunities for available feedstock (e.g., mixed native prairie) to influence technological developments in the biofuel industry.

2) Measurable Impact on Environmental and Conservation Public Benefits

- An application that demonstrates high potential to have positive impacts on environmental and conservation benefits, including water quality (sedimentation, nutrient loading, reduction of agricultural chemical use), hydrological restoration and flood reduction, and wildlife habitat improvements, should be highly prioritized.
- Project area proposals that demonstrate consistency with state or local natural resource plans so as to maximize public investment though targeting enrollments to sensitive or high-impact lands (i.e. riparian corridors, habitat complexes, drained basins) within the larger project area should be highly prioritized.
- Potential reduction or offset in greenhouse gas emissions, including soil carbon sequestration, could be taken into consideration when ranking project area applications.
- The range and diversity of environmental benefits likely to be achieved in a project area could be used as criteria for ranking project area proposals.

3) Likelihood of Project Success

- Project area applicants should identify the partner organizations involved in the project proposal, and include a description of their commitment to the project in order to demonstrate likelihood to recruit and enroll landowners.

- Applicants who have leveraged viable resources for program outreach and promotion through funding and in-kind donations should also be prioritized highly.
- Partner organizations that submit a project area proposal should demonstrate they are adequate and appropriate actors in designing and influencing a RIM-clean energy project.
- Opportunities for rural and statewide economic development could be an important element for ensuring project success and long-term sustainability, and could be used as potential selection criteria.

4) On-going Monitoring and Evaluation Plan

- On-going monitoring and evaluation of RIM-clean energy project areas will be an important element of the program's continued success. Project proposals should identify a monitoring plan for environmental or natural resource benefits (including integration of the RIM-clean energy project into existing conservation efforts, and a commitment to new or expanded monitoring programs) and agronomic practices and results (documentation of biomass yield and practices, providing project access for formal research).
- Responsibility for monitoring and evaluation of the proposed project area falls to the institutional partners who put forth a project area proposal, rather than to the individual landowner.

5) Project Area Diversity

- The diversity of project areas should be considered when ranking applications, with an aim for geographic diversity throughout the state of Minnesota and diversity of scale for selected project areas.
- The level of innovation demonstrated by a project area proposal could strengthen an application (i.e., innovative partnerships, innovative technology for bioenergy generation at an affiliated facility).
- The uniqueness of a project area proposal might also be considered, as BWSR may look for an array of project areas to create a diverse portfolio of pilot project areas for the initial roll out of RIM-clean energy.
- Technical variations among types of biomass facilities (between or within project areas) might be an important consideration for project area diversity.

Allocation of Funding

RIM-clean energy has been designed to take advantage of any available funding sources, however any funds must include 15% to implement the program with local Soil and Water Conservation Districts (SWCDs) and other implementing organizations determined by the BWSR board.

Once project areas have been selected and defined, the establishment of the RIM-clean energy enrollment process will be developed by BWSR in consultation with RIM-clean energy project partners and the local SWCDs delivering the program to landowners.

Project areas may range in size and scale; enrollment costs and estimated total acreage enrolled per project area could vary greatly. It is not the intention of a RIM-clean energy program to fully support all of the acres needed for any particular renewable energy project.

Individual Site Selection for Easements

The technical review committee recommends that selection of project areas proceed based on the process outlined above, and acknowledges that selection of individual sites within a designated project area is a separate process, for which BWSR would also be responsible. When selecting individual parcels for easement enrollment within a project area, BWSR may wish to consider whether a landowner has demonstrated intent to sell the biomass harvested off the RIM-clean energy easement to a facility for bioenergy production. While the statute does not dictate that a landowner is required to sell biomass harvested off a RIM-clean energy easement to a bioenergy facility, the program's intention is to support the emerging bioenergy industry by providing needed biofuel supply to facilities, and the level of commitment that a landowner demonstrates to sell biomass for biofuel could prioritize certain sites over others.

Timelines

A Request for Proposals similar to the Draft Project Area Application form (Appendix B) could be developed by the Board of Water and Soil Resources and published upon

establishment of RIM-clean energy processes and procedures by July 2008. A reply period of approximately 60 to 90 days with a review period of 30 to 60 days would provide for selection of project areas by December 2008.

Refer to Implementation and Next Steps, page 19, for additional discussion of timelines.

TIERED PAYMENT SYSTEM

Rationale for Tiered Payment System

To encourage landowners to grow native perennial plants using appropriate agriculture practices on lands that are well suited to provide conservation and natural resource benefits, the statute dictates that the Board of Water and Soil Resources must develop a tiered payment system for easements based partially on the benefits of the bioenergy crop production for conservation and natural resource benefits. In addition, the statute provides that the highest per-acre payment must be for diverse native prairie and perennials as wildlife habitat, biodiversity, water quality, and soil health benefit substantially from diverse native prairie plantings. Planting of annual crops is not allowed.

Discussion among members of the technical review committee revealed several important goals for structuring the RIM-clean energy payment system. First, the tiered payment system must ensure public payments are commensurate with public benefits. Second, the payment system must be simple enough to be easily understood by landowners and implemented by local program administrators. Third, the payment structure must provide that the highest per-acre payment compensates the greatest diversity of native plant species.

Structure of Tiered Payment System

The technical review committee recommends providing a base payment of 80% of estimated market value (EMV) for planting one native perennial grass or one native woody species. The payment tier will increase as the number of species increases and payment will increase with specific management practices or site location that increase environmental and/or conservation benefits. The payment factors are cumulative. For example, a site planted with four native prairie species would receive 90% of EMV. A diverse native prairie planting with greater than 15 species that achieves local priorities such as planted in a riparian zone could receive a maximum payment of up to 105% of EMV.

This payment structure recognizes that the greatest environmental benefit accrues when land is converted from row crop production to perennial cover. Additional plant diversity will increase wildlife habitat benefits while moderately improving other environmental benefits. Guidance to determine the allocation of "local factors" will be developed by BWSR in consultation with RIM-clean energy project partners and local SWCDs.

Rationale for Using Estimated Market Value as Base Rate for Payments

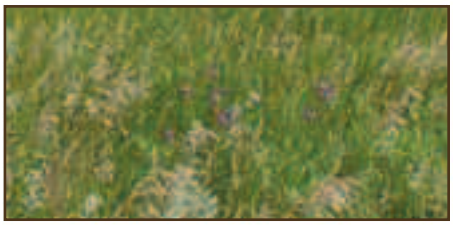
The technical review committee recommends using the estimated market value (EMV) for the base rate for payments, as estimated market value data is readily accessible from county records. Furthermore the estimated market value for a given tract of land reflects an agreed upon value for a specific parcel, as opposed to the county assessor's average market value for land in a township, which averages land values across an entire township. Historically, payment rates used in the RIM-Reserve program have been based on the average market value of land in the township, thus certain parcels are paid at a higher rate than their actual value, and others are paid at a lower rate than their actual value. It should be noted that the estimated market value that serves as the basis for taxes in a given year is based on market sales from two years previous to that year.

Rationale for Proposed Payment Rates

Members of the technical review committee are sensitive to the risks associated with assigning payment rates to tier levels, as the implications of inadvertently paying too much or too little for the success of a RIM-clean energy program are significant. Since RIM-clean energy is a new program model combining a working lands program with direct compensation for measurable environmental impacts, program success will be contingent upon the success of payment rates in offsetting landowner risk.

Continued on page 18

Table 3. RIM-Clean Energy Payment Structure

	Payment factor based on EMV	
	80%	Base payment for one native perennial grass or one native woody species planted
	+5%	Additional payment for second native perennial grass, forb or woody species planted
	+3%	Additional payment for third native perennial grass, forb or woody species planted
	+2%	Additional payment for fourth native perennial grass, forb or woody species planted
	+5%	Additional payment for a diverse prairie planting of more than 15 species
	Up to +10%	Additional local factors determined by local SWCD and/or identified in the Project Area application, such as wellhead protection or aquifer recharge area, planting on floodprone, riparian, or highly erodible lands, or for other environmental benefits (an Environmental Benefits Index). This additional payment is available only if two or more species are planted.

The recommended payment rates reflect the intention of the technical review committee to encourage initial early interest so as to achieve the goals of the legislation in supporting the development of an emerging biofuel industry in Minnesota while ensuring that the environmental benefits of native prairie plantings are maintained.

Rationale for Using Native Perennial Species

There are two major categories of benefits that are achieved by using native perennial species: conservation and carbon storage. The conservation benefits include reduced or eliminated tillage and erosion, reduced or eliminated use of fertilizers and pesticides, improved water filtration and infiltration, and improved wildlife habitat. Recent and ongoing bioenergy research has demonstrated the soil carbon storage potential in deep root systems, such as those found with native perennials.

Rationale for Environmental Benefits Index

Given the language of the legislative mandate and the current state emphasis on prioritizing water quality improvements, members of the technical review committee agreed that the position on the landscape of a proposed easement bears significant influence on the environmental and conservation benefits that could be achieved when native perennials are established, thus the parcel's specific position on the landscape should be reflected in the payment system. Again, the technical review committee placed high priority on the need for a proposed payment structure to be extremely simple in order to ensure landowner willingness to enroll and ease of implementation for local districts handling program administration. In addition, conversations with farmers and landowners in focus group meetings conducted by researchers at the University of Minnesota confirmed that ease of implementation and program simplicity is an important factor in ensuring landowner participation (see Appendix C: Farmer and Landowner Focus Group Report).

Funding Source for RIM-Clean Energy Payments

The RIM-clean energy program is expected to be funded primarily through bonding money, however the program is designed to allow the use of other funding sources to be identified as may become available.

Program Influences with Unknown Consequences

The technical review committee has identified several outside influences that could potentially impact the success of the RIM-clean energy program, but whose specific consequences cannot be determined at this time. First, as the bioenergy industry in Minnesota is still in the very early stages of development, there is not sufficient information available to predict the payment rates that bioenergy facilities might pay for biomass delivered to the facility. Second, as RIM-clean energy reflects a new program model, it is difficult to predict with accuracy the willingness of landowners to accept the proposed payment rates. Focus groups conducted by researchers at the University of Minnesota with farmers and landowners throughout the state have revealed a general sentiment among landowners that the payment rate for RIM-clean energy easements must be locally competitive with row crop returns, land rent values, and the saleable market value of the land. 80-90% of market value emerged as the payment rate that seemed reasonable and feasible to the highest majority of landowners contributing to focus groups. Finally, commodity prices, in particular for corn and soybeans in Minnesota and nationwide, have recently been rising at unprecedented rates. Additionally, the input costs to establish row crops of corn and beans have been on the rise. It is difficult to predict whether these trends will continue, or what actual impacts high commodity and input prices would have on RIM-clean energy. Future changes to the RIM-clean energy program will likely be necessary to accommodate the evolving demands of the biofuel and agricultural industries while maintaining protection of conservation and environmental benefits.

IMPLEMENTATION AND NEXT STEPS

LEGISLATIVE PROCESS AND PROGRAM ESTABLISHMENT TIMELINE

Several steps remain between the time of publication of this report and initial implementation of program procedures. The following is a rough timeline outlining projected next steps and relevant dates. This timeline is intended for reference only, and all dates are subject to revision.

1. RIM-Clean Energy Program Guidelines and Standards Draft Report is submitted to the Board of Water and Soil Resources Board of Directors for review and approval. *January 23, 2008*
2. A finalized and BWSR-approved report outlining RIM-clean energy program guidelines and standards is published and submitted to the Minnesota State Legislature for consideration during the 2008 Legislative Session. *Legislative session opens: February 12, 2008*
3. BWSR conducts informational meetings in counties to promote and publicize the RIM-Clean Energy Program Guidelines and Standards report. *February 2008*
4. Preliminary Expression-of-Interest Request is distributed statewide to identify potential interest in RIM-clean energy. Targeted distribution includes technical review committee member organizations, Regional Development Commissions, Resource Conservation and Development Councils, existing and proposed bioenery facilities, and Soil and Water Conservation Districts. *February 2008*
5. Minnesota Legislature act on RIM-clean energy program and request for RIM-clean energy bonding funding. *By session end: May 19, 2008*
6. BWSR develops program guidance that incorporates RIM-clean energy program features into the RIM-Reserve easement process, and makes necessary adaptations to RIM-Reserve guidelines. *Spring 2008*
7. BWSR develops fact sheets summarizing program highlights to be used for program promotion. *Spring 2008*
8. BWSR develops a Request for Proposals (RFP) for RIM-clean energy project areas. *Spring 2008*
9. Regional meetings held to answer questions and explain RFP and project area selection process. *Spring 2008*
10. RIM-clean energy RFP is published (assuming available funding). *By July 1, 2008*
11. RIM-clean energy bonding funding becomes available (if approved). *July 1, 2008*
12. Partner groups in potential RIM-clean energy project areas develop proposals in response to RFP. *Summer 2008*
13. RIM-clean energy project area proposals are reviewed and selected by BWSR. *No sooner than August 2008*

PROGRAM IMPLEMENTATION TIMELINE

After funding is secured and initial project areas have been selected, implementation of a RIM-clean energy program will require several additional steps, which are outlined below.

1. Soil and Water Conservation Districts (SWCDs), with assistance from the project area proposal team, publicize the RIM-clean energy program.
2. Landowners receive a comprehensive briefing on RIM-clean energy vegetative standards and specifications, payment rates, market opportunities for biomass, etc. from local SWCDs.

3. Interested landowners sign a RIM-clean energy agreement, beginning the easement process, which includes development of a management/bioenergy plan based on exisiting and emerging best management practices (BMPs).
4. The RIM-clean energy easement acquisition process takes on average about 6 to 12 months to complete, at which time the landowner receives payment for the easement and is reimbursed for the costs to establish vegetative cover.
5. Biomass available for harvest on the RIM-clean energy easement must follow the best management practices and specifications identified in the RIM-clean energy management/bioenergy plan. The technical review committee has developed draft guideline recommendations for bioenergy production and harvest that could be used to inform best management practices for RIM-clean energy management guidelines. The BMPs could also be informed by the work done by the Prairie Seed Production and BioEnergy Project led by the Minnesota Department of Natural Resources (see Appendix D: References and Related Information).
6. The Board of Water and Soil Resources will, in concert with local SWCDs in designated RIM-clean energy project areas, develop an annual monitoring and inspection procedure to ensure easement compliance and that public benefits are achieved.

CONCLUSIONS

As established in 2007 Minnesota State Statutes, Section 103F.518, the startup of a RIM-clean energy program is clearly feasible as many aspects of it are based on the long-standing and successful RIM conservation easement program. Expansion into the working lands area is expected to be similarly successful using the Board of Water and Soil Resources and Soil and Water Conservation Districts to acquire easements of at least 20 years on lands for growing bioenergy crops. Although the startup program is expected to be funded with state capital investment "bonding" funds, it is designed with the flexibility to incorporate funding from various other public or private sources. Recognition and utilization of market factors centered on a bioenergy production facility is a new element that must be incorporated into the current RIM program criteria.

Additional refinement and evolution of the RIM-clean energy program will be accomplished in consultation with technical review committee members to accomplish the dual program goals of:

1. stimulating the use of native, perennial vegetation for bioenergy production, and
2. assuring public conservation benefits are realized regardless of future market factors.

APPENDIX A: LEGISLATION CITATION

103F.518 REINVEST IN MINNESOTA CLEAN ENERGY PROGRAM

Subd. 1. Establishment of program.

(a) The board, in consultation with the technical committee established in subdivision 11, shall establish and administer a reinvest in Minnesota (RIM) clean energy program that is in addition to the program under section 103F.515. Selection of land for the clean energy program must be based on its potential benefits for bioenergy crop production, water quality, soil health, reduction of chemical inputs, soil carbon storage, biodiversity, and wildlife habitat.

(b) For the purposes of this section, "diverse native prairie" means a prairie planted from a mix of local Minnesota native prairie species. A selection from all available native prairie species may be made so as to match species appropriate to local site conditions.

Subd. 2. Eligible land. Eligible land under this section must:

(1) be owned by the landowner, or a parent or other blood relative of the landowner, for at least one year before the date of application;

(2) be at least five acres in size;

(3) not be currently set aside, enrolled, or diverted under another federal or state government program; and

(4) have been in agricultural use, as defined in section 17.81, subdivision 4, or have been set aside, enrolled, or diverted under another federal or state program for at least two of the last five years before the date of application.

Subd. 3. Designation of project areas. The board shall develop a process to designate defined project areas. The designation process shall prioritize projects that include coordinated cooperation of a cellulosic biofuel facility or a bioenergy production facility, target impaired waters, or support other state or local natural resource plans, goals, or objectives.

Subd. 4. Easements. The board may acquire, or accept by gift or donation, easements on eligible land. An easement may be permanent or of limited duration. An easement of limited duration may not be acquired if it is for a period less than 20 years. The negotiation and acquisition of easements authorized by this section are exempt from the contractual provisions of chapters 16B and 16C.

Subd. 5. Nature of property rights acquired.

(a) An easement must prohibit:

(1) agricultural crop production, unless approved by the board for energy production purposes; and

(2) spraying with chemicals, except as necessary to comply with noxious weed control laws, emergency pest control necessary to protect public health, or as needed to establish a productive planting as determined by the technical committee under subdivision 11.

(b) An easement is subject to the terms of the agreement provided in subdivision 6.

(c) Agricultural crop production and harvest are limited to native, perennial bioenergy crops. Harvest shall occur outside of bird nesting season.

(d) An easement must allow repairs, improvements, and inspections necessary to maintain public drainage systems provided the easement area is restored to the condition required by the terms of the easement.

(e) An easement may allow nonnative perennial prairie or pasture established by September 1, 2007, that meet the other objectives outlined in subdivision 7.

(f) An easement may allow grazing of livestock only if practiced under a plan, approved by the board, that protects water quality, wildlife habitat, and biodiversity.

Subd. 6. Agreements by landowner. The board may enroll eligible land in the reinvest in Minnesota clean energy program by signing an agreement in recordable form with a landowner in which the landowner agrees:

(1) to convey to the state an easement that is not subject to any prior title, lien, or encumbrance;

(2) to seed the land subject to the easement, as specified in the agreement, at seeding rates determined by the board, or carry out other long-term capital improvements approved by the board; and

(3) that the easement duration may be lengthened through mutual agreement with the board.

Subd. 7. Payments for easements. The board must develop a tiered payment system for easements partially based on the benefits of the bioenergy crop production for water quality, soil health, reduction in chemical inputs, soil carbon storage, biodiversity, and wildlife habitat using cash rent or a similar system as may be determined by the board. The payment system must provide that the highest per-acre payment is for diverse native prairie and perennials.

Subd. 8. Easement renewal. When an easement of limited duration expires, a new easement and agreement for an additional period of not less than 20 years may be acquired by agreement of the board and the landowner under the terms of this section. The board may adjust payment rates as a result of renewing an agreement and easement only after examining the condition of the established plantings, conservation practices, and land values.

Subd. 9. Correction of easement boundary lines. To correct errors in legal descriptions for easements that affect the ownership interest in the state and adjacent landowners, the board may, in the name of the state, with the approval of the attorney general, convey, without consideration, interests of the state necessary to correct legal descriptions of boundaries. The conveyance must be by quitclaim deed or release in a form approved by the attorney general.

Subd. 10. Enforcement and damages.

(a) A landowner who violates the term of an easement or agreement under this section, or induces, assists, or allows another to do so, is liable to the state for treble damages if the trespass is willful, but liable for double damages only if the trespass is not willful. The amount of damages is the amount needed to make the state whole or the amount the landowner has gained due to the violation, whichever is greater.

(b) Upon the request of the board, the attorney general may commence an action for specific performances, injunctive relief, damages, including attorney fees, and any other appropriate relief to enforce this section in district court in the county where all or part of the violation is alleged to have been committed, or where the landowner resides or has a principal place of business.

Subd. 11. Technical committee. To ensure that public benefits, including water quality, soil health, reduction of chemical inputs, soil carbon storage, biodiversity, and wildlife habitat are secured along with bioenergy crop production, the Board of Water and Soil Resources shall appoint a technical committee consisting of one representative from the Departments of Agriculture, Natural Resources, and Commerce and the Pollution Control Agency; two farm organizations; one sustainable agriculture farmer organization; three rural economic development organizations; three environmental organizations; and three conservation or wildlife organizations. The board and technical committee shall consult with private sector organizations and University of Minnesota researchers involved in biomass establishment and bioenergy or biofuel conversion. The technical committee is to develop program guidelines and standards, as appropriate to ensure that reinvest in Minnesota clean energy program contracts provide public benefits commensurate with the public investment. The technical committee shall review and make recommendations on the guidelines and standards every five years.

History: 2007 c 57 art 1 s 119

APPENDIX B:
DRAFT RIM-CLEAN ENERGY PROJECT AREA APPLICATION

APPLICANT ORGANIZATION:

Contact Person _____ Title _____

Organization _____

Address _____

City _____ Zip _____

Email _____

Telephone (_____) _____

RIM-CLEAN ENERGY PROJECT AREA DESCRIPTION:

Project Area Name: _____

Briefly describe the geographic boundary of the project area and attach a map of the proposed project area.

_____

_____

_____

PARTICIPATING RENEWABLE ENERGY MARKET[S]:

Market Name	Location	Estimated Date Biomass is Needed	Biomass Type[s]	Estimated Productivity Tons/Acre/Year	Estimated Acres

PROJECT PARTNERS:

Partner Organization	Describe Commitment to the Project (attach documentation)

Briefly describe your project, the partners involved and anticipated outcomes. Address the following issues in your project summary narrative:

Energy Market Description

- Type and size of the facility(ies), including energy requirement in btus and tons.
- Status of the facility (operational, under construction, permitted, planned, etc.)
- Type of biomass required
- RIM-clean energy contribution to the overall supply of biomass for the involved market

How the project will target outreach and enrollment and by whom.
How the following will influence targeting:

- Landowner acceptance
- Biomass productivity
- Environmental benefits and outcomes

Assessment of the project's anticipated success in the areas of:

- Land and agricultural suitability of the proposed biomass plantings
- Technical assistance available for establishment and management
- Experience and capacity of the project partners
- Meeting the energy market's need for biomass

Project timelines for outreach, recruitment, establishment and market demand.

Impacts on environmental and conservation benefits:

- List known impaired waters in the project area, their impairments and describe the potential for the RIM-clean energy project to reduce those impairments.
- Describe potential impacts on watershed hydrology and flood damage reduction.
- Describe how the project will contribute to wildlife habitat conditions in the project area.
- Identify how this project complements other state or local natural resource plans or projects.

Identify on-going monitoring plans for environmental or natural resource benefits and agronomic practices and results.

Identify lands within the project area that are currently enrolled in or recently retired from an existing conservation program, including retirement dates on contracts.

Signature: _____ Date: _____

Type Name: _____

Please visit our website for program information, criteria, and reference maps:
www.bwsr.state.mn.us/RIM-CE.html

Mail originals to:
Board of Water and Soil Resources
520 Lafayette Road North
St. Paul, MN 55155.

Email applications can be sent to:
rimce@bwsr.state.mn.us

For Office Use Only
Date Received _____
Grant Number _____
Action _____ Date _____
Notified _____ Date _____
Assigned to _____

APPENDIX C:
FARMER AND LANDOWNER FOCUS GROUP REPORT

RIM-CLEAN ENERGY EASEMENT PROGRAM

JANUARY 11, 2008

The University of Minnesota

Center for Integrated Natural Resources and Agricultural Management (CINRAM)

RaeLynn Jones Loss

Dean A. Current, Ph.D.

Anna Robertson

Five focus groups were conducted with farmers and landowners around the state of Minnesota in Lanesboro, St. James, Thief River Falls, Mahnomen, and Jordan. Farmer contact information was gathered from local Non Governmental Organizations (NGOs), Soil and Water Conservation District (SWCD) offices and University of Minnesota (UMN) Extension offices. The focus groups ranged in size from 6 to 12 people with an average duration of 90 minutes. Questions were developed with input from the Board of Water and Soil Resources (BWSR), farmer NGOs and researcher expertise. A pilot focus group was held with SWCD technicians.

From the focus groups, five overarching themes emerged, as well as some "notable others" (concepts that, while they were not large enough to be considered themes, they were raised more than once or those raising them had some very sound reasoning for bringing up these issues).

EASEMENT LOGISTICS

The RIM easement structure was explained to participants, to assist with understanding the parameters the new easement program would be operating under. It was quite clear that participants wanted the easement to be kept flexible in terms of management and allowable species.

> "The less restrictions you put on the easement the better off you are going to have as far as acceptability from the farmer... so far it sounds good to me, so long as you don't start getting a whole lot of other stuff stacked on..."

> "If you start coming with a long list of what farmers can do and can't do, then forget it."

Concerns were raised about losing base acres, however most folks qualified that by stating that no one knows what will happen with the next farm bill. It was clear farmers would really like to see the acres come out the same as they went in. Should landowners retain their base acres, the RIM-clean energy program would be all that much more appealing to them.

ADMINISTRATION OF EASEMENT

Participants wanted the easement to be kept administratively simple. Concerns were expressed over how much paperwork would be required, how long it would take to push the easement through, and whether they would be given assistance filling out paperwork. Every group had a horror story about an easement taking forever, having it be a handful of paperwork, or receiving no help understanding it or filling it out.

There was a lot of concern expressed by farmers about who would be administering and running the easement program. Farmers would like to see the program controlled by their local SWCD office. However, it is important to note that one group, Lanesboro, seemed particularly hesitant about their SWCD office administering the program. While the researchers acknowledged their obvious hesitancy, more could have been done to follow up on why they seemed hesitant regarding their local office.

Aside from the Lanesboro area group, the desire for local administration and control was raised several times at each focus group. Concerns were raised about St. Paul controlling the intricacies of the easement; all farmers seemed to agree that having local SWCD control intricacies would make the program more acceptable to farmers. They also wanted to be able to have some input on how their easement would be written.

> "Who knows the most about their land?... the farmer."

"The higher up you go, the higher rank, the better they (administrators) know how to say 'I don't know' or 'wait and see'... local control would have a lot to do with how acceptable the program was..."

"If you are going to be working with species on your land... you want to get some kind of technical assistance with that... local SWCD office assistance."

LENGTH OF EASEMENT

There was dissent among the participants about whether or not 20 years was too long for an easement. Some seemed to think 20 years was doable, but the majority were quite hesitant about that length of time. Many said the only way they would get involved in an easement of 20-year length was if the price was right. All of the areas surveyed seemed to have some kind of land pressure, either development (very heavy pressure closer to the cities), large corporate farms, city residents paying a premium for hunting/hobby land, reservation pressures, etc. These pressures must be acknowledged in the pricing scheme, but they are also a key reason folks are hesitant about 20 years because no one can predict the future. Also, they were very concerned about the technology changing, the biomass plant desiring a different type of crop, etc. Many of the farmers seemed very hesitant to mandate what the future generations or landowners should do.

"Making those decisions for the next character on the land... I am not so sure how I feel about that... there has to be some sort of an opt out plan... in 20 years things could be totally different and the state/county could be going in a different direction... even if it's a fairly significant penalty."

However, there were several landowners that seemed excited about the prospect of making an impact on future generations.

"I have such a small place. Flexibility is key. I am looking at turning 40 years old, 20 years is a long time... the other thing is it has be part of something bigger... its got to be kind of pretty real...global climate change... to look back in 15 years and say wow, I was part of that..."

"I put my land in a perpetual easement so my kids wouldn't have to worry about it... and then they can blame dad after I am gone..." (laughter)

ALLOWABLE PRACTICES

Farmers had a lot of questions about what would be allowed, and the researchers were not able to answer all of the questions that were asked. However, farmers and landowners were fairly clear about what they wanted to be allowed to do. They want to see the ability to spray weeds, especially thistle. They all seemed to recognize that pulling a crop off the land once a year could slowly deplete the soil. They raised questions and desires about being able to fertilize and burn their easement. A lot of discussion was had about time of harvest and number of harvests. The outcome of these discussions was not incredibly clear in any of the groups. Some wanted to harvest twice, others wanted the option not to harvest at all.

There was consensus about allowing the option for trees. Farmers wanted the option to plant trees if they chose to do so. Some of the groups expressed concern that wildlife benefits would decrease without trees. Others also thought allowing trees would improve the overall perception from the public and wildlife groups about the easement on their land.

"We are becoming an urban society and this will brighten the perception of agriculture... we are starting to get a bad reputation..."

"Down here (Southern Minnesota), it's the trees that protect the wildlife..."

Wildlife feed plot possibilities were raised several times at nearly every focus group. Conservation Reserve Program (CRP) contracts allow for a small area in the middle of the easement (or contract, as the case may be) to be planted in some kind of a feed crop for wildlife, be it corn, squash, oats, etc. Farmers would like to have the option to plant a feed plot for wildlife in the easement.

"You'd do more for the wildlife if you planted some grain sorghum and some oats and some corn and just leave it there all winter for them... that's what has held me back in the past from participating in the other programs... they don't allow it."

It seemed that farmers would like to see an outline of rules about allowable options with some local flexibility.

> "If you are talking everything from grasses to trees you need to have some specifications that we can work off of… that's a pretty big range."

PAYMENT FOR CONTRACT

Payment issues came up at nearly every intersection of the discussions. Landowners and farmers expressed concern over the large increase in corn and soybean prices over the last several years in relation to payment they could receive for this program. It was clear the payment has to be competitive with row crops, land rent and sale value of land. It has to be locally competitive; there cannot be one price statewide. Some participants thought that, for 20-year easements, the payment should not be the exact same as land value. Different percentages of land value have been debated. A reasonable amount seems to be 80% – 90% of saleable value, which had the most consent. Many wanted at least sale value if not a bit more. It was clear the price would be dependent on what they would receive for the harvest when they sold it to the biomass plant.

Several innovative ideas were generated about how to get the price right. One group came up with a bidding system idea, and another group wanted to see the easements auctioned off to create some competition.

The idea of a perpetual easement was not well received by nearly every attendee. They again raised concerns about the changing nature of local and state goals and the fact that the best technology available could change in the future. If folks would sign on to a perpetual easement at all, they would have to be paid over the current price of land, 10% - 25% over the land value seemed acceptable to most.

NOTABLE OTHERS

Tax Issues

Tax issues were raised by participants every time payment was discussed. Real estate tax relief has been an important issue, as taxes continue to increase for farmers. One of the reasons real estate taxes seemed to be such a big issue is if the land were taxed as active farmland, farmers will not make any money, even if they do sell their crop. Others were concerned about "waste land" taxes, which continue to increase because they are the only area one can build on. They also seemed to be concerned this program could influence the "waste land" taxes.

> "Corn and soybean farmers and bidding up the price of land… tax relief has to be a part of this."

Farmers were concerned about income taxes as well. A lot of concern was raised about the one-time payment, and how they would be taxed on this. If they are going to lose half of their payment to taxes, most folks will not sign up or the payment would have to increase substantially. The researchers were unable to answer questions about income and real estate taxes, but it is important to note that this was a concern.

Hunting/Wildlife Leases and Public Access

The issue of public access came up organically in every discussion around the state. Farmers are highly opposed to mandating public access on this land as part of the easement agreement. Alternatively, they would like the right to earn money from hunting leases. It was clear that some farmers were looking for another avenue of profit, as in South Dakota, while some folks simply said they wanted to maintain control, so they know who is on their land. One suggestion was to have to have some type of registration go along with this program so the public would have to register with the state and landowner if they were going to use the land.

> "If they're talking about opening it up to the public, I'm walking out of this room right now."

Hay/Pasture Issue

It seemed the haying issue came up for two reasons. One reason was if the biomass plant fell through or went bankrupt. The other reason was about competition and receiving a fair price for their grass. There has recently been an increase in hay prices in most areas surveyed, which could have been part of the reason for this concern as well as the issue of the free market. Farmers would like to be able pasture the land as another option.

> "What you really should do is come back down here next weekend and go to the… hay auction if you want to seem some excitement and understand those hay prices…"

Existing Natural Areas and "Remnant" Natural Areas

Several concerns were raised about what to do with land currently in a 'natural' state. Landowners wanted to know if they would be able to bring such land into the RIM-clean energy program. Farmers clearly felt that if landowners were not allowed to bring existing natural areas into the program, the state would be punishing those who are already trying to do right by the environment. Many had deep feelings and expressions about the punishment issue. While participants understood the need to increase natural areas, it was apparent they felt those already practicing good habits should be rewarded for that and not punished by not being allowed to enroll in the program.

A couple folks raised the issue about what the state was going to do to protect remnant natural areas. Some people own portions of land that have not been disturbed in recent history. Folks seemed to be concerned that a program such as this might motivate owners to tear up those areas to make it eligible for this program.

> "Like these little oak savannas – if you go to a program like this – they will tear them up (even if they are 300 years old) and plant prairie grasses."

Transitioning CRP to RIM-Clean Energy Easements

It was quite clear folks would like to be able to move land coming out of CRP into this program. Many concerns were raised about CRP land not being eligible. At the time of the focus groups, the researchers did not have a definitive answer about CRP land eligibility from the technical committee. There was a fair amount of concern about what would happen to former CRP acres if another program were not able to pick up those acres. Folks did not want to see those areas go back into production, but many made it clear they would have to put their CRP land into production simply because of finances.

APPENDIX D: REFERENCES AND RELATED INFORMATION

WEB REFERENCES:

1. BWSR: . . . . . *http://www.bwsr.state.mn.us/RIM-CE.html*

2. Minnesota Land Economics: . . . . . *http://www.landeconomics.umn.edu/*

3. NRCS Web Soils Survey: . . . . . *http://websoilsurvey.nrcs.usda.gov*

4. NRCS Conservation Practice Standards: . . . . . *http://www.nrcs.usda.gov/Technical/Standards/nhcp.html*

   - Restoration and Management of Declining Habitats (643)
   - Upland Wildlife Habitat Management (645)
   - Conservation Cover (327)

RELATED INFORMATION:

1. MN DNR Prairie Seed Production and Bioenergy Report:
   http://www.dnr.state.mn.us/aboutdnr/reports/pspb/index.html

2. Carbon Sequestration as a Rural Economic Strategy—Minnesota Terrestrial Carbon Sequestration Initiative (MTCS):
   http://files.dnr.state.mn.us/temp/carbon2008.pdf

3. Biomass Harvesting of Native Grasslands in West Central Minnesota: A production scale pilot study—
   West Central Research and Outreach Center, University of Minnesota:
   http://renewables.morris.umn.edu/documents.htm

4. Technical Review Committee BMP Guideline Recommendations for Bioenergy Production and Harvest:
   http://www.bwsr.state.mn.us/RIM-CE.html

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