



ENVIRONMENTAL AND ECONOMIC RESEARCH AND DEVELOPMENT PROGRAM

Landowners Willingness to Adopt Practices and Participate in Programs to Sequester Carbon

Executive Summary
December 2012

PREPARED BY:

EDWARD B. NELSON
BUREAU OF SCIENCE SERVICES,
WISCONSIN DEPARTMENT OF NATURAL RESOURCES,
PO BOX 7291, MADISON, WI 53707-7921



focus on energysm

Partnering with Wisconsin utilities

Production Credits

Editor: Dreux J. Watermolen



The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions regarding this plan, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

This publication is available in alternative format (large print, Braille, audio tape, etc.) upon request. Please call (608) 266-0531 for more information.

Executive Summary

Report Date: January 2011.

Project Title: “Landowners’ Willingness to Adopt Practices and Participate in Programs to Sequester Carbon.”

Investigator: Edward B. Nelson, Environmental Sociologist, Bureau of Science Services, Wisconsin Department of Natural Resources.

Research

Category: Environmental and Economic Impacts of Climate Change in Wisconsin Potentially Attributable to Electric or Natural Gas Use.

Project

Period: February 1, 2009 - December 31, 2010.

Object of Study: The agriculture and forestry sectors are unique in that they not only produce greenhouse gas emissions, but also provide terrestrial sinks that absorb and sequester carbon dioxide, thus reducing net greenhouse gas emissions. *Wisconsin’s Strategy for Reducing Global Warming* (Governor’s Task Force on Global Warming 2008) suggests actions that rural landowners can take to sequester carbon through various soil management practices, maintenance of vegetative cover carbon sinks, and the planting of prairies. The Governor’s Task Force recommendations also seek to prevent the return of marginal lands to row crop production (for biofuels generation) through the use of incentive payments and tax advantages.

The Wisconsin Department of Natural Resources (Wisconsin DNR) gauged agricultural landowners’ responses to these Governor’s Task Force proposals. A better understanding of landowners’ experiences, opinions, beliefs, and desires can help inform state policy discussions as the Task Force recommendations are further debated and possibly refined as a means of reducing the impacts of electricity and natural gas use in Wisconsin.

Summary of Findings: A primary goal of Focus on Energy is to provide data that can be used by policy analysts and policy makers. Our findings provide a better understanding of agricultural landowners’ opinions, beliefs, and desires relative to policy proposals included in the Governor’s Task Force report. They also provide insights into landowners’ knowledge of and experience with various conservation incentive programs. This is relevant because landowner responses to incentives will largely determine whether or not programs developed to sequester carbon are successful.

Programs intended to encourage prairie restoration and soil management that target non-farm/recreational landowners as prime candidates for grassland restoration may have the greatest chances of succeeding. Those landowners actively farming their land are unlikely to pull profitable lands out of production. Although not specifically addressed by interviewees, prairie restoration programs that target larger land holdings may have greater chances of success as these landowners have greater opportunities to meet multiple objectives, can spread the costs of conservation over a larger land base, and may be more willing to experiment with grassland management as a part of their personal goals. Focusing implementation of such programs in southwestern Wisconsin would capitalize on the ecological potential of the area.

Landowners expressed a wide range of reasons for restoring prairies, but were largely uninterested in restoring prairies to sequester carbon. As such, programs that support restoration as a pastime or that

target habitat conservation as a primary focus may prove more attractive to landowners than programs specifically focused on carbon sequestration.

In the absence of significant incentives/benefits to offset the costs associated with restoration, many landowners will opt to not participate and may seek to reap the benefits of increased crop prices. As prairie restoration activities must be pursued over multiple years, incentive programs that spread significant benefits over a longer time period may prove more appealing to landowners than those programs that offer only one-time payments/credits. As such, the Governor's Task Force recommendation that a tax credit program for establishment and maintenance of prairie plantings be administered as an annual credit through the state income tax system, similar to the homestead tax credit or farmland preservation tax credit, may have merit in the eyes of landowners.

The level of effort associated with restoration and maintenance of prairies has implications for program design. Programs might include reimbursement provisions specifically related to investments in equipment and labor/services associated with restoration work. Cooperative approaches that allow for shared use of equipment might also prove appealing to landowners. Successful programs might also include a means of organizing volunteer labor to assist landowners with restoration and maintenance tasks, an idea not contemplated by the Governor's Task Force.

Given landowners questions regarding the effectiveness of burned prairies to sequester carbon, the Governor's Task Force proposal to fund "a competitive research grant program for investigation of carbon sequestration rates and longevity in prairie systems" may make sense to help further build the justification for such approaches.

The opinions and beliefs expressed by interviewees underscore the importance of a holistic approach to natural resources management. Programs that promote open grassland habitat may inadvertently foster growth of the deer herd that generates further conflict between various interests. On the other hand, efforts to reduce herd size, while beneficial to prairie restorations, can further consternation by some landowners.

Programs intended to encourage prairie restoration will need to consider the conflicting goals of other conservation incentive programs that may appeal to landowners. The creation and implementation of any new programs should benefit from close coordination between responsible agencies. Modifications to existing landowner incentive programs may merit further consideration/discussion.

In order to be successful, programs will need to keep paperwork and approvals to a minimum, provide consistent administration and enforcement, and remain flexible to landowners' interests and goals. A successful program will provide recognition for participation and landowner efforts, and will consider the educational and technical assistance needs of participating and potentially interested landowners. Potential program participants could benefit from a clearinghouse/one-stop-shopping approach for providing information on available programs and sources of information/assistance.

Future Directions: The findings and conclusions drawn from the structured interviews suggest four action areas that may merit further consideration by state policy makers: 1) Consider amending tax policy, 2) Provide education on prairie restoration. 3) Reduce paperwork and permissions, and 4) Conduct landowner research and evaluate programs.

Disclaimer: Points of view expressed in this report do not necessarily reflect the views or policies of Focus on Energy. Mention of trade names and commercial products does not constitute endorsement of their use.

Contents

List of Tables	3
List of Figures	3
Abbreviations and Acronyms	4
1. Introduction	5
1.1. EERD Program Interest Areas	5
2. Research Approach and Project Activities	7
2.1. Project Administration	7
2.2. Literature Review	7
2.3. Landowner Interviews	9
2.4. Landowner Survey	11
2.5. Presentations and Publications	11
3. Findings and Implications	13
3.1. Context and Trends	13
Implications	14
3.2. Motivations for Prairie Restoration	15
Implications	17
3.3. Drawbacks to Prairie Restoration: Costs	17
Implications	18
3.4. Drawbacks to Prairie Restoration: Invasive Species	19
Implications	20
3.5. Drawbacks to Prairie Restoration: Hard Work	20
Implications	22
3.6. Prescribed Burning	22
Implications	24
3.7. Pine Trees Compete with Prairies	24
Implications	26
3.8. Taxes and Tax Credits	26
Implications	28
3.9. Easements	28
Implications	30
3.10. Deer and Deer Damage	30
Implications	31
3.11. Interacting with the Farm Service Agency (FSA)	32
Implications	36
3.12. Learning Prairie Restoration	36
Implications	38

(Contents continue on next page.)

4. Conclusions and Future Directions	41
4.1. Consider Amending Tax Policy	41
4.2. Provide Education on Prairie Restoration	41
4.3. Reduce Paperwork and Permissions	42
4.4. Conduct Landowner Research and Evaluate Program	42
5. Acknowledgments	43
6. Literature Cited, Further Reading, and Background Material	43
Appendix A – Individual Interview Protocol	49
Appendix B – Survey Instrument	51

List of Tables

1. Conservation Programs Available to Wisconsin Landowners 36

List of Figures

1. In 2008, the Governor’s Task Force on Global Warming suggested actions that landowners can take to sequester carbon. 5
2. Historic distribution of prairie in Wisconsin. 13
3. Many landowners have a “plan” for their property. Interviewees shared their management objectives with the researcher. 15
4. Landowners are locked in a constant, intractable struggle with invasive species like common buckthorn and wild parsnip. 19
5. Prairies must be burned to be kept free of woody and invasive vegetation. The need for prescribed burning has implications for program design. 22
6. Some landowners may prefer planting pine trees over prairie grasses and forbs. Current conservation programs may encourage pine plantings. 25
7. White-tailed deer can hinder efforts to re-establish prairie plants. Reducing the size of the deer herd, however, can arouse the ire of neighbors who want better hunting opportunities. 30
8. Tax policies affect landowners’ decisions. This landowner receives a tax credit for pine trees planted in an area that was historically oak savanna and an agricultural land taxation rate for planting corn along this road. 41

Abbreviations and Acronyms

CREP – Conservation Reserve Enhancement Program

CRP – Conservation Reserve Program

CWD – chronic wasting disease

DATCP – Department of Agriculture, Trade and Consumer Protection, Wisconsin

DNR – Department of Natural Resources, Wisconsin

ECP – Emergency Conservation Program

EERD – Environmental and Economic Research and Development, Focus on Energy

EPA – Environmental Protection Agency, U.S.

FSA – Farm Services Agency

FWP – Farmable Wetlands Program

GRP – Grasslands Reserve Program

LIP – Landowner Incentive Program

MFL – Managed Forest Law

NRCS – Natural Resources Conservation Service

PE – Prairie Enthusiasts

PSC – Public Service Commission, Wisconsin

TIP – Transition Incentive Program

TNC – The Nature Conservancy

TU – Trout Unlimited

VPA-HIP – Voluntary Public Access and Habitat Incentives Program

WICCI – Wisconsin Initiative on Climate Change Impacts

WRP – Wetland Reserve Program