

US EPA ARCHIVE DOCUMENT

Project Summary

Title: Using an Environmental Performance and Risk Appraisal Tool to Make Informed Decisions about Wisconsin's Green Tier Program

Applicant: Wisconsin Department of Natural Resources (WDNR)

Project Manager: John Shenot
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Total Project Cost: \$275,000

Project Period: October 1, 2008 - September 30, 2011

Project Abstract:

WDNR proposes to develop, test, and apply a comprehensive environmental performance and risk appraisal methodology, modeled after the Operator and Pollution Risk Appraisal (OPRA) tool developed by the Environment Agency of England and Wales but suitable for Wisconsin. WDNR is constantly challenged by legislators and other stakeholders to demonstrate that participants in our voluntary environmental leadership programs (the Environmental Cooperation Pilot Program and Green Tier) are actually leaders and that our ERP, EMS and leadership programs contribute significantly to environmental improvement. Because of these challenges, WDNR has constantly sought to identify and adopt best practices for benchmarking and measuring comprehensive environmental performance. The most promising tool we have ever encountered in that regard is OPRA. WDNR expects that a similar tool can be used to meet the needs of Green Tier and other programs and inspire voluntary performance improvements across a full range of issues. Use of this tool will also facilitate future exploration of other policy innovations such as integrated permits and sector plans, all of which could be part of a "Smart Regulation" package that allows WDNR to become more efficient and to prioritize work based on a risk reduction framework.

Statutory Authority and Flexibility:

All project activities are authorized by Sections 104(b)(3) of the Clean Water Act and 103(b)(3) of the Clean Air Act, which authorize EPA to establish grants for research and development of programs to prevent, reduce, control or eliminate pollution. The flexibility afforded by existing statutes should be sufficient to implement this project. If additional flexibility is needed, WDNR will use the authority in our Green Tier law (s. 299.83, Wis. Stats.) and adhere to existing agreements between WDNR and EPA concerning Green Tier.

Certification of State Agency Support From the Highest Level:

The Secretary of WDNR is aware of and endorses this proposal. If this proposal is selected, a letter of endorsement will be provided with the final work plan.

Project Narrative

A. Problem (Issue) Statement

Traditional American regulatory approaches have nearly always been based on separate permitting, compliance and enforcement activities for each environmental medium (air, water, land). Generally speaking, these approaches have been fairly successful when viewed from a narrow, single-medium perspective but have failed to look at overall, comprehensive environmental performance. The shortcomings of traditional permit-based programs mostly stem from two systemic limitations of the approach.

First, our traditional regulatory programs nearly always establish minimum standards that must be met but rarely if ever include incentives for exceeding those standards. Performance-based environmental leadership programs, such as EPA's Performance Track and Wisconsin's Green Tier, offer a viable alternative that clearly addresses this shortcoming.

Secondly, the traditional regulatory programs lack an integrated view of environmental performance. These programs frequently draw lines that leave some business sectors regulated while others go unregulated (e.g., air MACT standards). Large businesses, no matter how well managed or how little risk they pose, may be heavily regulated while small businesses, no matter how poorly managed or how much risk they pose, are ignored. (This is true, for example, in the case of water permit rules for livestock operations.) And some critical environmental issues (e.g., global warming) are completely unaddressed. In response to these shortcomings, a variety of approaches have been developed in the U.S. and abroad. Environmental Results Programs (ERP) are one way to encourage improvement in small businesses. Environmental Management Systems (EMS) can be a useful tool for reducing risk and getting at completely unregulated businesses and/or unregulated environmental impacts. And one other intriguing alternative, which has become the norm across Western Europe, is integrated comprehensive permitting.

What's true for the nation is true for Wisconsin. Despite decades of progress we still struggle with several daunting environmental challenges, including nonpoint water pollution, sustainable water and energy use, regional air pollution, and global warming. We have made progress on most of those issues thanks to our traditional regulatory programs, which focus on media-specific permits and subsequent compliance and enforcement activities. However, we have also reached a point of diminishing returns on our investment in these traditional regulatory programs.

Wisconsin is faced with an obvious choice between expanding our regulatory programs to address the serious environmental problems that remain, or supplementing those with other programs that can deliver comprehensive, integrated environmental improvement. However, recent proposals to expand the scope of our regulatory programs (e.g., for air toxics and animal waste) encountered fierce political resistance. As a practical matter, the best prospect for Wisconsin to address our unmet environmental needs in the foreseeable future is by supplementing, rather than expanding, the regulatory programs. WDNR therefore is fully invested in promoting all of the tools highlighted by the State Innovation Grant program: ERP, EMS, and Voluntary Environmental Leadership Programs. This proposal represents the next step in our efforts, a step that will buttress our previous efforts while allowing us to further explore the potential benefits of a comprehensive, integrated approach to environmental permitting.

B. Background

WDNR has offered voluntary environmental leadership programs for more than 10 years. We began in 1997 with the Environmental Cooperation Pilot Program (ECPP), which is sanctioned by state law (s. 299.80, Wis. Stats.). Six Wisconsin businesses enrolled in this pilot program by signing 5-year agreements, with coverage extending to 16 facilities. The enrollment period for this program ended in 2002, but businesses in the program had the option of extending their agreements an additional five years and we still have active agreements covering 8 facilities.

In 2004, WDNR launched our newest voluntary leadership program, Green Tier. The purpose of Green Tier is to promote and recognize Environmental Excellence. The program is also sanctioned by a state law (s. 299.83 Wis. Stats) and has two tiers or participation levels. Tier 1 is an entry level, designed to encourage innovation, collaboration and new environmental goal-setting. Tier 2 involves more rigorous participation requirements, places greater emphasis on superior environmental performance, and uses contracts as a means of giving customized regulatory flexibility proportional to environmental performance. Charters are an entirely new Green Tier environmental tool to be used by business sectors, geographic regions, trade associations and/or parts of a supply chain to create new relationships, jointly manage environmental risk, address collective incentives and manage participation by participants at various levels of the program. More than 20 businesses are currently participating, some with multiple locations, and the numbers are steadily growing as applications roll in.

The ECPP and Green Tier share many features. Both programs require participants to implement an EMS, audit their EMS annually, involve the public and collaborate where appropriate with stakeholders including EPA, and submit annual public reports on audit results and environmental performance. Importantly, both programs offer incentives for beyond-compliance performance and continual improvement.

More recently, WDNR has collaborated with the Wisconsin Department of Commerce to offer an ERP program for the printing sector. That program may serve as a model for additional sector-based ERP programs to be launched in the future.

WDNR is constantly challenged by legislators and other stakeholders to demonstrate that ECPP and Green Tier participants are genuine leaders and that our leadership, EMS, and ERP programs contribute significantly to environmental improvement. WDNR is required to submit annual ECPP reports and biennial Green Tier reports to the Legislature, and we get frequent inquiries on program results from members of the public and academics around the world. Furthermore, the ECPP has been externally audited several times by Wisconsin's Legislative Audit Bureau.

One reason these requests for information are so challenging is that the reports WDNR gets from participating businesses lack uniform or standardized performance measurement methods. Our laws require participants to submit annual reports, but the laws do not dictate content and WDNR struggles to provide guidance to participants. As a result, the information WDNR can share normally comes in the form of site-specific anecdotes rather than comprehensive results. In addition, some companies are good about reporting outputs but share little information about outcomes. Faced with a hodgepodge of disjointed reports, WDNR struggles to assess the total

impact of our programs and some stakeholders openly wonder if companies are only reporting the good news. Lastly, one final point of frustration is that most of the performance measures currently available to us fail to recognize the inherent complexity and environmental impacts of some activities, fail to recognize local conditions, and fail to recognize how the quality of management at a site affects environmental risk. For example, one of the participants in the ECPP is the state's largest fossil-fuel power plant. No matter how well managed this facility is, it will likely always be a one of the largest sources of air emissions in Wisconsin. So what constitutes environmental leadership?

WDNR recognizes performance measurement as a fundamental shortcoming and a fundamental challenge for our current programs. Because of these performance measurement challenges and the serious ramifications if we fail to meet them, WDNR has constantly sought to identify and adopt best practices for benchmarking and measuring comprehensive environmental performance. The most promising tool we have ever encountered in that regard is the Operator and Pollution Risk Appraisal (OPRA) tool developed by the Environment Agency of England and Wales. (WDNR's John Shenot became familiar with OPRA in 2004 and 2005 while working with the Environment Agency under an Atlantic Fellowship in Public Policy. His mentor at that time was a leader in the Agency's "Modern Regulation" program, and he was also exposed to their integrated permitting program, to the Integrated Regulation of Agriculture Program, and to sector plans. Indeed, Mr. Shenot was the principal author of the first draft of the Environment Agency's dairy sector plan.)

C. Project Objectives

WDNR proposes to develop a comprehensive environmental performance and risk appraisal methodology, modeled after OPRA but suitable for Wisconsin. WDNR will then test and refine the tool by applying it to selected business sectors. Finally, we propose to use the tool to inform Green Tier decisions and inspire voluntary performance improvements across a full range of environmental issues. We believe this project could be of major strategic importance not only for Green Tier and Wisconsin's EMS and ERP efforts, but also for regulatory programs and leadership programs across the nation.

WDNR wishes to emphasize that we are not looking for better performance measures solely or even primarily to demonstrate that leadership, EMS, and ERP programs are effective. Our vision is much broader than that. We believe the history of EPA's Toxics Release Inventory (TRI) bears witness to a fundamental truth about performance measures, which can be summarized by the adage: what gets measured gets managed. Observers of the TRI program saw how some of the greatest environmental improvements came from businesses that found themselves in the "dirty dozen" or at the bottom of their industry. Public pressure from neighbors also motivated many businesses to improve. The goal of some businesses may have been nothing more than to reduce the numbers they had to report to TRI, but the effect was the same as if they were green leaders.

We believe a comprehensive performance and risk appraisal tool may have the same salutary effect as TRI, but with more potential for comprehensive improvements. OPRA looks at compliance history and quality of management in addition to environmental releases. Accordingly, OPRA creates incentives not just to reduce releases but also to improve compliance

and to improve management. So even though we intend to use an OPRA-like tool to validate the performance of our voluntary environmental leadership companies, we are confident that the tool could motivate both leaders and laggards to improve.

Lastly, WDNR also wants to stress that we see the development of this tool as a safe first step that will facilitate future exploration of other policy innovations such as integrated permits and sector plans, not just in Wisconsin but also nationally. All of these tools can be part of a Smart Regulation package that allows governments to become more efficient and to prioritize all work based on a risk reduction framework.

D. Methodology or Technical Approach

WDNR proposes what is essentially a simple project that will nevertheless require considerable effort. The technical approach can be outlined as follows, keeping in mind that more details on OPRA are available from the Environment Agency website at (<http://www.environment-agency.gov.uk/business/1745440/444671/466170/411964/>).

1. Research Performance & Risk Appraisal Tools

- Closely review OPRA methodology from Environment Agency of England and Wales.
- Review Washington Department of Ecology's Industrial Footprint project for pulp and paper mills.
- Review Ross and Associates' project related to performance measures for EMS Permit projects in Wisconsin & Colorado.
- Review Texas 2002 SIG project to see what they did with setting enforcement priorities based on risk and performance.
- Possibly review other relevant recent attempts to do multi-media environmental performance measurement.

2. Develop and Launch Tool

- Making use of the best parts of other efforts, craft a tool that makes sense for Wisconsin and makes use of data we already have or can readily collect. This step will include getting stakeholder input on proposed tools via:
 - Green Tier Advisors;
 - Green Tier participants (at a future Green Tier Advantage working session);
 - Formal or informal public comment period.
- Involve EPA in selecting one or more sectors for a pilot test of the tool (with options restricted to sectors WDNR has actively engaged and has an established working relationship with, or sectors where such a relationship could readily be established).
- Develop scores for all Wisconsin facilities in selected sector(s), or a representative sample of facilities (depending on size of the sector).
- Review scores with affected facilities for accuracy.
- Revise tool as needed based on results of pilot test.
- Use Green Tier and/or ERP programs to "launch" the tool, possibly in the form of Green Tier "model terms" for performance measures or the annual list of aspects we use to prioritize applications.

3. Use Scores to Make Green Tier, EMS and ERP Program Decisions and to Drive Environmental Performance Improvements. Possibilities include:
 - Encourage Green Tier participants to develop and report their scores and consider the scoring methodology when assessing their significant environmental aspects.
 - For Green Tier applicants and participants, establish proximity to or progress toward Superior Environmental Performance as the term is defined in Wisconsin law.
 - Use scores as part of future ECPP and Green Tier reports.
 - Use scores as input to a sector plan, sector Charter, ERP program, or similar strategic attempt to improve performance. WDNR will determine the best course of action at an interim juncture of the project with input from EPA and stakeholders.
 - Use scores as one factor in setting State/Regional priorities (e.g., inspections and compliance work) in next Performance Partnership Agreement.
 - Discuss results with lowest scoring facilities and encourage voluntary improvement.
4. Assess strengths and weaknesses of methodology on an ongoing basis, looking for areas of potential improvement.
5. Submit quarterly progress reports summarizing technical progress, planned activities for next quarter, and summary of expenditures. Submit final report within 90 days of completion of the project period, including complete overview/summary of all activities, all data and results, and explanation of any impediments and how they were addressed.

Collaborations or Partnerships

WDNR takes complete responsibility for this project. Although there will be extensive public involvement, we do not have any formal partners or collaborators at this time. Nevertheless, we do intend to collaborate informally. WDNR recognizes that there are peer organizations with considerable knowledge of this subject, and we will seek their help in designing and testing our performance and risk appraisal tool. We intend to kick off the project by learning as much as we can about the subject from EPA's Integrated Permitting International Collaboration Effort and from the Washington Department of Ecology's Industrial Footprint project. We also intend to seek EPA's input when selecting the sector(s) upon which we test the tool, and when reviewing results. WDNR intends to share and compare results with Washington's Footprint project. Ultimately, if we determine that there is sufficient interest, WDNR would like to convene and lead a workshop on these efforts involving EPA and other states.

Public Involvement

WDNR strives to be transparent and accountable to the public in all our actions, but this is especially true with our innovation programs. This project will be no different. It will involve numerous opportunities for meaningful public involvement.

To begin with, our vision for this project is that it will inherently encourage greater public involvement by creating a simpler, more uniform measure of performance. If the project succeeds, the public will be more capable of assessing the environmental performance of our leadership companies and other businesses than ever before.

WDNR intends to actively seek input on our performance and risk appraisal tool at each stage of its development. We plan to seek input as we develop the first draft of the tool from our external group of Green Tier Advisors and from some of our leadership companies. After WDNR develops a draft tool is, we will assess the performance of a group of companies and discuss the results with those companies. After modifying the tool as needed based on feedback, it is our intention to issue a public notice and request public comment on a final draft of the performance and risk appraisal tool.

Ultimately, WDNR intends to use this new tool in several ways, some of which will lead to further public involvement. Any application of the tool within the Green Tier program, as previously discussed, will be discussed with the Green Tier Advisors. If use of the tool is specified in any future Green Tier applications or proposed Charters, there will always be a public comment period before those are finalized. Most importantly, WDNR intends to use this tool and the scores it generates as input to future strategic initiatives (also described above). Any such initiative will be launched with a high level of public involvement.

Perhaps it goes without saying, but if awarded a grant WDNR will announce the start of the project on our website and will issue a press release to media outlets in Wisconsin. In addition, WDNR will spread the word via a long distribution list we keep of persons and organizations in Wisconsin who are interested in our innovation programs. All of these announcements will explain opportunities for further public involvement. WDNR expects to deliver presentations on the project at conferences, meetings, and other relevant events in Wisconsin. WDNR has also included sufficient travel money in our proposed budget to allow for limited outreach outside of Wisconsin. Finally, WDNR will post full documentation of the tool, any scores we develop, all progress reports, and the final report on our website.

E. Outcomes and Measures

Because the goal of the project is to *develop* a new tool for measuring outcomes, it is particularly difficult at this time to describe how we will measure project outcomes. We offer the following as a starting point, with the expectation that further refinement will be needed between this pre-proposal stage and the start of the project.

The primary output of this project will be a fully-documented comprehensive environmental performance and risk appraisal tool, modeled after OPRA but suitable for Wisconsin. At interim stages of the project, draft versions of the tool will be available and shared with key stakeholders via public meetings and a public comment period. Secondary outputs will include a public notice to start the public comment period, as well as quarterly project progress reports, and a final project report. WDNR ultimately intends to measure environmental outcomes by tracking changes in the scores we develop for various businesses. We will also strive to develop measures of how the tool changes the knowledge and behavior of ECPP and Green Tier participants and the knowledge of key stakeholders. The best way to measure these latter outcomes may be to formally solicit and compile feedback about our ECPP and Green Tier performance reports and track whether the use of this tool improves understanding and public confidence in the programs.

Budget Summary

State: Wisconsin

Agency: Department of Natural Resources

Project Title: Using an Environmental Performance and Risk Appraisal Tool to Make Informed Decisions about Wisconsin's Green Tier Program

Financial Information removed by EPA as confidential business information.

Environmental Results Past Performance

Within the past three years, WDNR has benefited from the following assistance agreements:

1. A 2007 State Innovation Grant for a project titled “Use of Whole Farm EMS as a Supplement to CAFO Permits for the Dairy Sector.” The Bureau of Cooperative Environmental Assistance has been in the lead on this project.
2. A 2004 State Innovation Grant for a project titled “Improved Environmental Results and Increased Regulatory Flexibility in Air Permitting for the Printing Sector Using EMSs and an ERP.” The Bureau of Air Management has been in the lead on this project and the Bureau of Cooperative Environmental Assistance has played a supportive role.

For both of the listed agreements, WDNR has submitted quarterly progress reports that describe accomplishments during each quarter and plainly note where progress falls short of expectations. Also, for each agreement a final report will be submitted but those reports are not yet due.

Please note that the 2007 State Innovation Grant is a relatively new project and WDNR has only recently (December 2007) submitted our first progress report.

Programmatic Capability

Within the past three years, WDNR has benefited from the following assistance agreements which are similar in size, scope and relevance to the proposed project:

1. A 2007 State Innovation Grant for a project titled "Use of Whole Farm EMS as a Supplement to CAFO Permits for the Dairy Sector." The Bureau of Cooperative Environmental Assistance has been in the lead on this project.
2. A 2004 State Innovation Grant for a project titled "Improved Environmental Results and Increased Regulatory Flexibility in Air Permitting for the Printing Sector Using EMSs and an ERP." The Bureau of Air Management has been in the lead on this project and the Bureau of Cooperative Environmental Assistance has played a supportive role.

Although neither project has been completed to date, WDNR is pleased with the progress being made on both projects and we feel we have been able to successfully manage the agreements. We have succeeded in part due to close cooperation and open communications with our counterparts at EPA.

For both of the listed agreements, WDNR has submitted quarterly progress reports in keeping with program requirements. For each agreement a final report will be submitted but those reports are not yet due. (Please note that the 2007 State Innovation Grant is a relatively new project and WDNR has only recently submitted our first progress report.)

Staffing Plan:

If this project is funded by EPA, WDNR plans to create a full-time position with benefits for a three year period. The position would be located in WDNR's Bureau of Cooperative Environmental Assistance and would work closely with the Bureau Director (currently Mark McDermid). The position would be filled through an open competitive process. Recent openings in the Bureau have generated a strong list of candidates and WDNR anticipates having no trouble recruiting a qualified and capable person. WDNR's John Shenot will serve as the project contact and lead all related efforts until such time as a project manager is hired.

Organizational Experience:

WDNR's Bureau of Cooperative Environmental Assistance will be in the lead if this proposal is funded. The persons involved in applying for the grant all have experience working with EPA on successful grant applications and we have a good track record of meeting deadlines. We are confident that we could achieve the objectives of the proposed project because we have support throughout the Department and we have staff with particularly relevant experience and interest in this topic.

John M. Shenot

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Recent Experience and Accomplishments

Wisconsin Department of Natural Resources (6/92 – present)

Business Sector Specialist for Energy and Agriculture, 1997-present

Air Management Engineer, 1994-1997

Hazardous Air Pollutant Specialist, 1992-1994

- Negotiated a Charter agreement for Wisconsin's Dairy Sector under the state's Green Tier law
- Successfully applied for \$275,000 State Innovations Grant from U.S. Environmental Protection Agency to assist dairy sector with development of environmental management systems
- Completed Leadership Academy training
- Secured two grants totaling \$587,000 for sustainable agriculture initiative and built network of partners and contractors to implement related projects
- Negotiated with electric utilities to develop three of Wisconsin's seven Environmental Cooperative Agreements for innovative regulatory reform, including the first ever
- Collaborated with environmental management system experts in Australia and developed recommendations for improving environmental performance of agriculture sector in Wisconsin
- Coordinated negotiations for first Wisconsin proposal submitted to USEPA under the federal Project XL program for regulatory innovation, one of the first such proposals submitted jointly by an electric utility and a state agency
- Managed all aspects of \$500,000 grant, including proposal writing, supervision of employees and contractors, and reporting on results, for a project that modernized Department's information systems and vastly improved public access to environmental data
- Recognized by Governor's "Ideas That Work" program for contributions to an environmental management systems feasibility study for state government operations
- Issued Title V permits for operation of sources of air pollution
- Involved in two successful enforcement cases against companies that violated air pollution rules
- Contributed to design of Great Lakes Regional Air Toxics Emissions Inventory and led quality-assurance efforts on first-ever multi-state air emissions inventory

Atlantic Fellow in Public Policy (9/04 – 6/05)

Collaborative Environmental Policies for the Dairy Industry

- Conducted independent research on public policies in the United Kingdom that promote sustainable agricultural development, particularly in the dairy sector
- On behalf of my host organization, the Environment Agency, collaborated with the National Farmers Union and other stakeholders to develop the first complete draft of an Environmental Plan for the Dairy Sector in England and Wales

Independent Subcontractor (1/97 – 3/98)

Air Pollution Consultant

- *Wrote an 80-page report for Sierra Club documenting problems caused by toxic air pollution in the Great Lakes region, existing policy measures, and potential alternatives*
- Trained Ukrainian Ministry for Environmental Protection and Nuclear Safety on air pollution emissions inventory methods and offered recommendations on Ukrainian regulatory proposals

Other Employment Experience

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|------------|--|--------------------------------|
| 10/91-6/92 | Michigan Office of Waste Reduction Services | <i>Source Reduction Intern</i> |
| 6/91-8/91 | U.S. Environmental Protection Agency | <i>Research Fellow</i> |
| 1/91-12/91 | Great Lakes Commission | <i>Research Associate</i> |
| 5/90-5/91 | National Oceanic and Atmospheric Administration | <i>Physical Scientist</i> |
| 3/90-12/90 | University of Michigan School of Natural Resources | <i>Research Assistant</i> |
| 7/87-10/89 | General Dynamics Corporation | <i>Service Loads Engineer</i> |

Education & Training

Master of Science, Natural Resource Policy, December 1991

University of Michigan - Ann Arbor, Michigan

- *Dean's List*
- Relevant Courses: Resource Policy & Administration, Resource Policy Analysis, Conflict Management, Negotiations Skills, Applied Microeconomics, and Statistical Data Analysis

Bachelor of Science, Aerospace Engineering, May 1987

University of Maryland - College Park, Maryland

- *Chancellor's Scholar*
- *Glenn L. Martin Scholar*
- *Maryland Distinguished Scholar*
- *National Merit Scholar*

Professional Development, June 1992 - Present

- Relevant Courses: Project Management (*offered by Wisconsin Department of Administration*); Energy Resources (*University of Wisconsin*); Energy Utility Basics (*Wisconsin Public Utility Institute*); Leadership Academy, Basic Facilitation Skills, Building Basic Negotiation Skills, Perceptive Communications I & II, Perceptual Thinking Patterns, and Basic Principles For A Collaborative Workplace (*all offered by Wisconsin Department of Natural Resources*)

Civic Involvement

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| 2006- | Member, City of Madison Solid Waste Advisory Committee |
| 2006-2007 | Campaign Manager, Brian Solomon for Madison City Council |
| 2003-2004 | Member, City of Madison Joint West Campus Advisory Committee |
| 2000-2004 | Member, Dudgeon-Monroe Neighborhood Association Transportation Committee |