Maine/Massachusett's Joint Project Comparing Voluntary Self-Certification Incentive Pilot Program Approach (Maine) and Mandatory Approach (Massachusetts) in Reducing Stormwater Pollution

I. Project Title: **Maine's Voluntary (Environmental Leader) Self-Certification Pilot Program to Reduce Stormwater Pollution and Improve Environmental and Energy Performance for Existing Maine Grocery Businesses**

II. Project Applicant(s): Maine DEP and Massachusetts DEP

III. Project Cost: $ 189,790

IV. Project Period: December, 2009 to September, 2010

V. Narrative Elements:

a. Overview of the Project: The Maine Department of Environmental Protection (ME DEP) will develop and implement a voluntary self-certification program addressing stormwater management practices for parking lots and impervious areas at existing Maine grocery stores. This program will also address energy usage and other business practices by Maine's grocery stores. The Massachusetts Department of Environmental Protection (MA DEP) will continue to develop its regulatory program with a proposed statewide stormwater general permit for impervious surfaces of five acres that includes new and major redevelopments to install treatment and recharge stormwater BMPs. Maine will learn from MA DEP in the next two weeks whether its regulatory program will be implemented soon enough to allow comparisons to be made to the results of Maine's program by the end of the grant period. This voluntary self-certification approach is modeled after the ME DEP's nationally recognized and highly successful Environmental Leader "green" certification program for Maine's hospitality and restaurant sectors, a program that has been replicated in at least six other states. Grocery stores that are certified based on taking a minimum number of actions will receive an Environmental Leader decal which can be prominently displayed at the store.

Utilizing Maine Environmental Leader certification outreach materials, workbooks, measurement protocols and stormwater Best Management Practices (BMPs), Maine will solicit participant grocery stores and participating businesses to improve their overall environmental performance, including implementing stormwater BMPs and energy reduction practices. We will develop an estimate of stormwater pollutants based on modeling data from the BMPs installed.

Each state will test two different incentive strategies to determine which is more effective in attracting participation by business. The project team also wants to determine whether the respective strategies had any influence over the participants' selection of BMP technologies. Maine will test its voluntary self-certification incentive strategy to determine its effectiveness in: 1) attracting participation by businesses to improve their stormwater management and other environmental and energy best management practices, and 2) actually reducing polluted run-off, energy usage, and making other environmental improvements. Maine will encourage grocery

business participation by: 1) building involvement with the Maine Grocers Association, other grocery associations, and grocery store chains and individual stores; 2) increasing awareness of stormwater effects on water quality; 3) encouraging involvement by existing watershed organizations and municipalities and urging them to encourage businesses to participate; and, 4) green branding by DEP of successful participants as Environmental Leaders. ME DEP will test the sector's desire to take voluntary action to reduce polluted run-off, energy usage, and make other environmental improvements that demonstrate that they are responsible environmental stewards. The success of this program can then be used as a basis of comparison with regulatory approaches to address stormwater management that have been or will be adopted elsewhere, including in Maine's Long Creek Watershed and the Massachusetts Charles River Watershed.

This approach will allow us to evaluate the effectiveness of relying upon "external" incentives in encouraging behavior change, as demonstrated by the voluntary implementation of non-structural BMPs as well as the installation of structural BMP technologies.

Project implementation should result in greater awareness of stormwater pollution within the grocery store sector, reductions in polluted run-off, an analysis of the effectiveness of the two strategic approaches, and an evaluation of the strengths and weaknesses of this voluntary self-certification workbook checklist for the grocery business sector.

Problem Statement: Stormwater pollution from existing developments is a significant contributor to the impairment of lakes and streams in urban watersheds. National and state efforts to reduce stormwater pollution have resulted in stormwater permit requirements for redeveloped property. However, developments completed before the imposition of a permit program are not required to obtain stormwater permits. Thus, existing users can indefinitely continue to pollute at existing levels.

Research has shown that certain types of businesses, such as large parking lots associated with malls, contribute inordinately to water quality problems in local receiving waters. There are many peer-reviewed papers supporting this conclusion. In particular, see Tom Schueler's "Hydrocarbon Hotspots in Urban Landscape: Can They Be Controlled?" published in Watershed Protection Techniques 1 (1) 3-5. This pilot project will not only encourage improvement of grocery stores' overall environmental performance but will emphasize improvement of stormwater best management practices. This project focuses on encouraging implementation of stormwater best management practices, including the retrofit of modern structural stormwater BMP technologies, at these large and often heavily trafficked impervious surfaces to reduce stormwater pollution. The project team will work with all Maine grocery stores interested in the self-certification process.

Technical Approach: This project will test the effectiveness of a voluntary self-certification workbook checklist approach to increasing overall environmental performance, with a strong emphasis on reducing stormwater pollution, and including energy and other business practices. More specifically, the pilot will determine the effectiveness of a voluntary self-certification process in encouraging specific grocery stores or chains of stores to implement stormwater BMPs. The project will proceed in the following manner:

1) Select the study areas using the following criteria: Maine will choose the Maine grocery store business sector Massachusetts will select an urban, significantly impaired stream;
2) Define the total area of impervious surface of participating grocery businesses;
3) Measure the impervious project area for each targeted business to model water quality improvement estimates based on implementation of BMP technologies;
4) Solicit participants from the total population of grocery stores in Maine. Massachusetts will solicit participants by appealing to permit requirements;
5) Develop outreach materials and delivery methods;
6) Develop metrics to measure environmental improvement results;
7) Provide outreach, including workshops, to educate and train participants in implementing environmental improvement practices. This will include partnering with interested organizations including Maine Grocers Association to advertise and help sponsor the workshops;
8) Collect project results, including metrics, through Environmental Leader certifications;
9) Provide technical assistance regarding implementation of BMPs listed in the workbook;
10) Calculate pollutant reductions that will be achieved by the installation of each type of BMP technology by utilizing available standardized modeling information. These technologies may include, but will not be limited to, oil/water separators, bio-filters such as tree boxes and rain gardens, porous pavements, and other structural stormwater systems;
11) Evaluate the transferability of this pilot project to a statewide program for other business sectors and/or to grocery stores in other states; and,
12) Compare the relative success of the two states' approaches.

1. Goals & Objectives of the Project: The project will use various outreach and communication tools to identify program participants, and to engage and work with the grocery store sector in a collaborative fashion. Contact has already been made with Maine's two largest grocery store chains and one of its grocery store trade associations. The responses received to this self-certification program, including its strong focus on stormwater management, has been extremely positive. By concentrating on this business sector, Maine will test and evaluate the ability of a voluntary self-certification strategy that is associated with public recognition to improve environmental performance, including particularly reductions in stormwater pollution and energy usage.

2. Logic Model – see attached

3. Table and Narrative Describing key activities and milestones

    1) **CURRENT SITUATION AND NEED** - The dramatic increase in

development in Maine and Massachusetts, especially commercial developments that create large impervious surfaces, and the corresponding increase in the number of impaired or soon to be impaired water bodies, create a clear and pressing need to address polluted run-off. In addition, the threat posed by global climate change creates a clear and pressing need to address energy usage. The health and safety risks posed by the use of toxic chemicals create a clear and pressing need to reduce our use of and find safer alternatives to these chemicals. Maine's voluntary Environmental Leader self-certification program offers an innovative alternative to the traditional regulatory/enforcement/compliance model that allows us to proactively work with unregulated facilities and encourage environmental improvements, including implementing stormwater BMPs. This program has proven to work with Maine's hospitality sector, and has yielded dramatic energy savings and other environmental improvements. Offering a multimedia environmental and energy certification program that includes mandatory stormwater management practices provides a wide variety of environmental practices designed to engage the grocery store sector. This is important because this allows us to reach many more sources with environmental technical information and assistance during a resource constrained period. Maine also is responding to public and private entities whoshare environmental concerns and want to be publicly recognized as "green." Massachusetts will test the ability to use a state regulatory approach to implement BMP technologies to improve impaired watershed water quality. The results of the two state efforts will permit a comparison of each's effectiveness in addressing water quality.

2) **OBJECTIVES AND PUBLIC BENEFITS -** In addition to overall environmental and water quality improvement, the following sets out our specific goals:

1. Increase the number of grocery store facilities implementing BMPs;
2. Increase the number of BMPs being implemented within the grocery business sector;
3. Increase the public's and the grocery business sector's awareness of environmental issues, stormwater pollution and pollution prevention benefits;
4. Decrease pollutant loading;
5. Expand Maine's ability to reduce pollution by adding voluntary self-certification to existing regulatory tools;
6. Track Massachusetts' implementation of a regulatory stormwater program and measure its cost-effectiveness, resource requirements and permitting processes;
7. Transfer relevant elements of the project to colleges, universities and other states to promote the use of voluntary self-certification with additional business sectors; and
8. Provide recommendations in our final report to effectively transfer successful elements of the project regionally and

nationally.

The following are the public benefits expected as outcomes from the project:

1. Increased public awareness of stormwater pollution and appreciation of pollution prevention and energy saving benefits;
2. Increased number of facilities implementing environmental BMPs and an increase in the number of BMPs being implemented within the sector;
3. Reduced energy usage and carbon emissions;
4. Increased implementation of other sustainable business practices by grocery stores
5. Decreased pollutant loading from grocery store sites and other businesses; and,
6. Increased public awareness of the importance of stormwater management, and more sustainable energy and other business practices.

Milestones and Timelines -The following timeline estimates are based on EPA's final award date of October 2007 and grant revision date of January 2010. The key elements and staff involved are included in the table, along with the identification of deliverables and outputs for quarterly reporting, and the final case study report.

Activities	**Milestones**	**Staff**	**Begin Timeline**	**End Timeline**
Receive EPA grant funding approval for revised project		Roy, Peter, Julie, Fred	January, 2010	February 2010
Develop and complete a draft Quality Assurance Project Plan (QAPP) and Logic Model	Draft QAPP Final Logic Model	Roy, Peter, Julie, Fred	January, 2010	February, 2010
Adopt a final QAPP for the project based on the revised voluntary certification program	Adopt final QAPP	Roy, Peter, Julie, Fred	January, 2010	February, 2010

Actions	Milestones	Staff	Begin Timeline	End Timeline
Launch project with a press event at a participating grocery store and include all partners (EPA, DEP, MGA and others)		Roy, Peter, Julie, Fred	March, 2010	March, 2010
Staff assigned to project coordinates with stormwater staff and gather available data to determine baseline conditions for participating grocery stores		Roy, Peter, Julie, Fred	January, 2010	December, 2010
Continue to coordinate and implement monthly meetings and/or conference calls with Maine, Massachusetts, and EPA		Roy, Peter, Julie, Fred	January, 2010	February, 2011
Continue to identify and recruit Maine grocery store businesses through the Maine Grocers Association, Shaw's Supermarkets, Hannaford's Supermarkets, etc. and owners/operators of properties with large impervious surfaces (Massachusetts).		Roy, Peter, Julie, Fred	January, 2010	December, 2010

Actions	Milestones	Staff	Begin Timeline	End Timeline
Based on continued project research continue to refine the stormwater pollutant measurement tool to determine changes in pollutant run-off following implementation of BMPs. It is anticipated this would incorporate accepted modeled data for BMPs applied to GIS mapping		Roy, Peter, Julie, Fred	March, 2010	April, 2010
Develop database for the project		Roy, Peter, Fred	February 2010	April 2010
Develop/refine self-certification checklist workbook items for at least 10 stormwater best management practices	List of BMPs for the project presented in the self-certification workbook	Roy, Peter, Julie	January, 2010	February, 2010
EPA to approve self-certification workbook	EPA approval or self-certification workbook		January 2010	February 2010
Advertise Environmental Leader program incentives through Grocer Associations outreach materials and newsletter and communication with chains including press releases as appropriate	List incentives to be tested	Roy, Peter, Julie	January, 2010	March, 2010
Develop outreach information, including Environmental Leader grocery store decals	Outreach information	Roy, Peter, Julie	January 2010	February 2010

Actions	Milestones	Staff	Begin Timeline	End Timeline
Conduct workshop to educate participants regarding workbooks/checklists		Roy, Peter	March, 2010	March, 2010
Distribute workbooks to participating facilities (email link to interested groups and stakeholders. Encourage facilities to utilize workbook, complete checklist and submit		Roy, Peter	March, 2010	September, 2010
Populate the database to house the grocery store checklist data		Roy, Fred	January 2010	June 2010
Make self-certification workbooks and other assistance/outreach information available on ME DEP and MA DEP web sites for easy access and increased transferability to other states	Materials available on the web site.	Roy, Fred	March 2010	February 2011
Review of self certifications by staff		Roy, Peter, Fred	April 2010	February 2011
Targeted follow-up among participating facilities, based upon certification results including evaluate number and type of stormwater BMP engineered solutions (such as tree boxes) installed at each grocery store location	Evaluation and follow up with facilities indicating implementation of structural stormwater BMPs	Roy, Peter, Fred	October 2010	December 2010
Follow up random post-certification site visits conducted		Roy, Peter	May 2010	December 2010

Actions	Milestones	Staff	Begin Timeline	End Timeline
Explore other grants available through EPA (319 grants etc) and through Association resources and potential corporate sponsorships from larger companies to small companies that could be used to assist project partners in the installation of BMPs. This would assist additional facilities to become Environmental Leaders		Roy, Peter, Fred	June 2010	September 2010
Recognition of facilities that were in compliance and implemented beyond compliance and pollution prevention practices. Recognition would be through Environmental Leader certification branding and logo	Award "Environmental Leader" recognition	Roy, Peter, Julie	September 2010	January 2011
ME DEP, assisted by MA DEP, will host at least 2 information exchange meetings for other states, tribes and/or interested stakeholders to facilitate the transfer of information and innovation. These activities may include site visits to Environmental Leader facilities and demonstrations of pollution prevention and BMP solutions, including innovative stormwater solutions	Agendas and meeting outcome summaries for at least 2 information exchanges	Roy, Peter, Fred	September 2010	September 2010
Set-up ongoing support and monitoring of installed BMPs		Roy, Peter, Fred	September 2010	October 2010

Actions	Milestones	Staff	Begin Timeline	End Timeline
Develop and complete case study of voluntary self-certification project (final report)		Roy, Peter, Fred with assistance from Julie	October 2010	November 2010
Complete and Submit Quarterly Reports	Quarterly Reports; 4 per year		October 2007	November 2010
Complete Final Report	Final Report			February 2011

3) **COMPLIANCE WITH FUNDING REQUIREMENTS** – The above described milestones and objectives, as well as the "current situation and need" section, set out both states' financial and resource needs. In addition, this project meets all of the additional requirements for funding set out in our respective regulatory framework, as follows:

This multi-state stormwater project meets each of the guidelines for the specific purposes of this assistance agreement program. We present a framework for environmental innovation consisting of five major elements:
1. Strengthen EPA's innovation partnership with states through Maine's voluntary self-certification project which can be compared to regulatory approaches adopted in Long Creek, Massachusetts Charles River, or elsewhere;
2. Focus on priority environmental issues such as restoring and maintaining water quality through stormwater BMP work, and potentially reducing the cost of water and wastewater infrastructure through the installation of cost-effective BMP technologies. Additional beyond compliance environmental and energy practices [Maine] support participation of grocery stores and support their improved use of stormwater best management practices;
3. Diversify environmental protection tools and approaches by increasing stormwater information resources and environmental technology, providing Environmental Leader branding [Maine] and implementing results-based goals and measures through the voluntary self-certification workbook;
4. Summarize and promote most technically effective and cost-effective stormwater BMPs through web postings, and organizations such as the Maine Grocers Association; and
5. Foster institutional behavior change through educating agency staff about the promotion of Environmental Leader branding through beyond compliance efforts of program participants at respective agencies. The project will lay out an integrated system of compliance assistance that encourages pollution prevention using self-

certification (where permissible in lieu of permitting), and certification measurement to gauge the performance of grocery businesses in primarily stormwater, as well as other environmental and energy control success. Maine's success will be measured by the number of grocery businesses achieving Environmental Leader certification status, including their individual stormwater management practice improvements and long term recertification efforts (Maine) as well as compliance monitoring and enforcement program to help ensure that participating facilities achieve and maintain compliance (Massachusetts).

This multi-state approach, including voluntary self-certification and a mandatory stormwater program, will demonstrate that agencies can reduce stormwater pollution generated by a large number of sources with impervious surfaces through both voluntary and regulatory approaches. The project may allow comparison of the two approaches in terms of the costs and benefits and cost-effectiveness of each.

Promoting the project: The project will involve a broad list of public and private stakeholders, including the Maine Grocers Association, corporate offices of grocery stores, Efficiency Maine, possible stormwater watershed implementation teams, associations and through other interested public and private entities. In Massachusetts, the regulatory project will use internal drivers (i.e., self-interest) to encourage participants to educate public and private stakeholders.

The scale-up for this voluntary self-certification program includes: expanding the application to additional business sectors; promoting the use of stormwater tools that lower administrative/permitting costs by using common metrics to measure performance results-a method that can be easily replicated and exported to other learning states by sharing data and environmental results; and continuing to facilitate the growth of a national network of states using voluntary self-certification workbooks. These linkages could also achieve economies of scale due to a growing number of states implementing voluntary self-certification programs addressing stormwater best management practices and other green practices.

The statutory authorities indirectly or directly affecting this project include: the Clean Water Act, Section 104 (b) (3) (3 U.S.C. § 1254 (b) (3)]) – authorization to prevent, reduce or eliminate water pollution; Solid Waste Disposal Act, Section 8001 (42 U.S.C. §6981)– authorization to promote resource recovery and resource conservation systems and hazardous waste management systems, including the marketing of recovered resources; and Safe Drinking Water Act, Sections 1442 (a) and (c) (42 U.S.C. § 1(a) and (c)) – authorization to control and prevent the physical impairments of man resulting directly or indirectly from contaminants in water, or to the provision of a dependably safe supply of drinking water. Statutory Authority and Flexibility- State of Maine § 342. Commissioner, duties, 3-A Negotiating Agreements, The Commissioner may negotiate and enter into agreements with federal, state and municipal agencies.

State Agency Support- Maine DEP supports this proposed voluntary self-certification

program for environmental performance and stormwater BMPs. Staff assigned to this project will be supported and guided by management. Massachusetts DEP also supports their mandatory stormwater general permit requiring stormwater BMPs. The Commissioner's Office will assign staff to the project in order to ensure support and guidance by management.

In addition, the proposed project meets each of the Evaluation Criteria and the Qualitative Selection Factors, specifically the national strategic value of the project, environmental justice, and past performance of the state in State Innovation Grant Program funded projects. The project accomplishes this by targeting stormwater pollution, which is a National Priority Environmental Issue. The project also addresses stormwater sectors identified as posing multi-media compliance problems; and includes pollution prevention and the evaluation of cutting-edge stormwater technologies and the development of incentives encouraging their use. In short, the proposed Voluntary Self-Certification model will provide an innovative alternative to permitting with intentions of gaining measurable results.

Our project will contribute to achieving many EPA Strategic Goals including:
1. Cleaner and safer water by implementing stormwater BMP technologies;
2. Potentially affecting preservation and restoration of land by improving the water quality of the watershed, thus improving the value and restoring the original condition (preservation) of the land;
3. Improving the health of communities and ecosystems by improving water quality as well as other media in areas that are in communities that are or could be potentially designated environmental justice (EJ) areas;
4. Improving the quality of environmental stewardship with particular emphasis on stormwater pollution, while working on other environmental and energy issues; and
5. Improving accessibility of multi-media environmental information including energy and pollution reduction goals, while making information more accessible to the public via the internet.

Maine DEP and Massachusetts DEP will build on their existing knowledge of innovative approaches, expand the use of priority innovations through Maine's voluntary self-certification program, and share our knowledge and solutions with other states and EPA. We will make information available through the ERP consortium and by presenting our findings at national meetings when state travel policies permit.

b. **ENVIRONMENTAL OUTCOMES** – The following environmental outcomes are expected. Please refer to the attached logic model to understand the expected flow of the project and outcomes:

Outcomes (expected benefits)**	How measured	Time/Resources needed to reach outcomes	Impacts and/or Changes in environmental conditions for individuals and populations
Increased number of grocery stores and businesses or properties adopting stormwater BMPs	Self-certification workbook checklists and site visits.	Staff FTE Maine Partial funding staff MA	Reduction in pollutant run off from the sites with installed BMPs with modeled results.
Increased number of grocery stores implementing environmentally sustainable business practices	Self-certification workbook, and site assistance visits	Staff FTE Maine	Increase overall environmental performance of grocery stores Increased public awareness and involvement through stakeholders meeting including Maine Grocers Association.
Increase BMP technical transfer through corporate mentoring and sponsorship	Modeled results based on performance measurements of BMPs	Staff FTE Maine	Increased public awareness and involvement through stakeholders meeting including Maine Grocers Association
Decreased stormwater pollutant loading performance measures	Performance measurement and modeling results	Staff FTE Maine Partial funding staff MA	Increase watershed quality and environmental results Improvement in water quality indicators

e. **TRANSFERABILITY** – This Environmental Leader voluntary self-certification project should be easily transferable to other state programs after the grant is closed out. The Maine project management team will present findings to their senior management team, including the Office of the Commissioner to expand the use of the voluntary self-certification program within their existing pollution prevention program. We will also propose applying the processes developed by this project to other sectors. Opportunities to further institutionalize voluntary self-certification programs within our states' regulatory framework will be explored. Visual and media presentations, on-site demonstrations and other visual teaching tools will be used to organize the project and findings so that they can be used to train our staff.

Our project staff plans to collaboratively present the findings of the project on an ongoing basis at national pollution prevention meetings, as well as at regional and state meetings. Our presentations at national and regional meetings should facilitate the transferability of the project.

PUBLIC INVOLVEMENT/STAKEHOLDERS –Maine will rely upon the same scientific information showing that reducing stormwater pollution from existing uses is critical to improving water quality.

- Maine DEP will reach the general public by press releases and meeting with stormwater planning committees or related groups when applicable, and will encourage participants to notify the public of their project's progress through mechanisms such as press releases;
- Maine will collaborate with sector-specific trade associations and individual grocery store chains and individual grocery stores to encourage and recruit voluntary participation;
- Both states will utilize incentives to attract and increase participation;
- Maine will rely upon recognized technical information that models the effectiveness of stormwater BMPs to reduce sediment, phosphorus and other pollutants;
- Maine will rely upon the volunteer participants to self-certify their BMP installations;
- Maine will notify groups interested in protecting Maine's water quality and encourage their participation to help recruit businesses in their watershed; and
- Maine will inform all other interested parties through its Pollution Prevention Compliance Advisory Panel (P2 CAP), Maine Grocers Association meetings and newsletters, Office of Innovation newsletters and press coverage/releases.

I. Reporting Requirements

Quarterly program reports, including environmental outcomes to date, will be prepared and submitted to EPA. Reports from stakeholder meetings and other important milestones, as noted in the work plan, will also be distributed. Outcomes and results will be reported to EPA through presentations at other meetings as required. A Quality Assurance Project Plan (QAPP) will also be completed within 90 days of receiving approval of the revised grant project.

Quarterly project reports and the final report will include the following:

- A summary of the work completed in the reporting period;
- Deliverables, outputs, outcomes, etc. completed in the reporting period;
- Description of progress on completing individual tasks and milestones reached;
- Any changes to the planned project schedule based on events;
- A look forward to the work to be done in the next reporting period;
- A summary of any revisions needed or made to the project work plan and or QAPP;
- QA reporting as required in the QAPP; and
- Summary information on grant fund expenditures by budget category.