

US EPA ARCHIVE DOCUMENT



**STORM WATER EXCELLENCE PROGRAM IN TENNESSEE  
(SWEPT)  
EPA State Innovation Grant Pre-Proposal**

**Project Category:** Exploration of the relationship between Environmental Management Systems (EMS) and permitting / Team project

The National Pollutant Discharge Elimination System Program (NPDES), established under the Clean Water Act, is designed as a permitting tool used to minimize and/or eliminate discharges of pollutants into the waters of the United States. The program is established on a self-reporting basis, supported by enforcement and compliance actions, as necessary. The Innovation Grant would allow us to develop and pilot a fundamentally different approach. Documented EMS-based pollution prevention programs and pro-active management approaches would be used to establish standards of excellence. Regulatory incentives would be established for permittees that comply with pre-established standards of excellence.

**Project title:** Storm Water Excellence Program in Tennessee (SWEPT)

**State Agency Applicant:**

Tennessee Department of Environment and Conservation (TDEC) Nashville, Tennessee  
D & B number: 878355437

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**Team participant:** Tennessee Department of Transportation

**Contact:** Ed Cole, Chief of Environment and Planning  
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**Required Federal regulatory flexibility:** None identified at this time.

**Statement of Deputy Commissioner's endorsement:** Deputy Commissioner Paul Sloan has been briefed on this proposal. He fully endorses the proposed project.



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### Pre-Proposal Narrative

#### Introduction

Storm water discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events that often contain pollutants in quantities that could adversely affect water quality. Most storm water discharges are considered point sources and require coverage by an NPDES permit. The primary method to control storm water discharges is through the use of best management practices. SWEPT would provide regulatory incentives for permittees that go beyond compliance in storm water management.

#### Construction Storm Water Runoff

Disturbed soil, if not managed properly, can be washed off-site during storms. Unless proper erosion prevention and sediment controls are used for construction activities, silt transport to local surface water is likely. Excessive silt in waterways causes adverse impacts due to biological alterations, reduced passage in rivers and streams, higher drinking water treatment costs for removing the sediment, and the alteration of water's physical/chemical properties, resulting in degradation of its quality. This degradation process is known as "siltation".

Siltation is a major problem with Tennessee surface waters. TDEC has determined that 27.2% of its assessed rivers and streams are polluted due to siltation. Since one millimeter of soil over one acre site can weigh 5 tons, even a minor uncontrolled construction activity can cause major impairment in surface waters. Soil losses from pastureland averages 1.5 tons/acre-year, cropland cultivation can lose 20 tons/acre-year, whereas major construction activities can result in 150 to 200 tons/acre-year in the storm water runoff.

Since 1992, the division has permitted over 10,000 construction sites by way of general permit. During the general permit term (June 2000 through April 2005), 8,667 projects across the state were identified as requiring construction permit coverage. A total of 161,250 acres (or approximately 0.6 % of the State of Tennessee area) were reported disturbed by construction activity in the same time period. The average size of construction site was 19.7 acres, with a median size of 8 acres. An additional 1,436 construction projects have received a notice of coverage in the period of April 2005 to January 2006, with 316 sites currently pending permit coverage.

The present system protects the quality of the waters of the state exclusively through the administration of the Tennessee Department of Environment and Conservation's (TDEC) eight regional Environmental Field Offices and the Nashville Central Office. Property owners, developers, builders, contractors and subcontractors who plan to conduct any construction must submit a Notice of Intent (NOI) and receive Notice of Coverage (NOC) from TDEC. Requesting coverage under the general permit means that an applicant has obtained and examined a copy of the permit, and thereby acknowledges the applicant's claim of ability to be in compliance with the permit terms and conditions.



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Industrial Storm Water Runoff

Tennessee's Multi-Sector General NPDES Permit for Storm water Runoff Associated with Industrial Activities (TMSP) covers storm water discharges associated with industrial activity from the 11 industrial categories which the EPA has determined to contain storm water discharges consistent with the EPA's definition of "storm water discharges associated with industrial activity." These 11 categories have been regrouped into the 29 industrial sectors based upon similarities in the nature of the industrial activity, the type of materials handled and material management practices employed.

Generally, the term "storm water discharges associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. This is only part of the extensive definition of such discharges as promulgated by the EPA at 40 CFR §122.26(b)(14).

This permit requires analytical monitoring for discharges from certain classes of industrial facilities. TDEC believes that industries may reduce the level of pollutants in storm water runoff from their sites through the development and proper implementation of a storm water pollution prevention plan as discussed in each Sector of the TMSP. The permit only requires analytical monitoring for the industry sectors or subsectors that demonstrated a potential to discharge pollutants at concentrations of concern.

To determine when such analytical monitoring would be required, the EPA established "benchmark" concentrations for the pollutant parameters on which monitoring results had been received. The "benchmarks" are the pollutant concentrations above which the EPA determined represents a level of concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks are also viewed by TDEC as a level, that if below, a facility represents little potential for water quality concern. As such, the benchmarks also provide an appropriate level to determine whether a facility's storm water pollution prevention measures are successfully implemented. The benchmark concentrations are not effluent limitations and should not be interpreted or construed as such. These values are merely levels which TDEC is using to determine if a storm water discharge from any given facility merits further monitoring to insure that the facility has been successful in implementing a storm water pollution prevention plan. As such, these levels represent a target concentration for a facility to achieve through implementation of pollution prevention measures at the facility.

Limited resources to manage the construction and industrial storm water management programs require us to explore innovative ways to address the issue effectively without impeding necessary development. Successes under this pilot could be duplicated with other industry segments within the storm water effort and in other regulatory programs within TDEC, as well as in other States.



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**Project goals and expected environmental outcomes**

The project goal is to establish an Environmental Management System-based storm water excellence program that would provide permitting incentives for construction industry and manufacturing industry participants. Participation in, and compliance with, this excellence program would provide various benefits to permittees, to the Department, and most importantly, to the environment. The incentives may include, but are not limited to: priority in processing of application forms, reduced frequency of monitoring and visual observations, reduced inspection schedule, changes in report submittal requirements, etc.

Targeted outcomes from the implementation of this project include a reduction in the inspection violations related to storm water at construction and industrial sites, as well as an increase in the regulated communities' willingness to pursue standards of excellence in the protection of the waters of the state. The success of the pilot will be measured by: (1) a demonstrated decrease in inspection violations by SWEPT program participants; and (2) an increase in the numbers of pilot participants and interested participants within the regulated community.

**How does project demonstrate a broad, strategic innovation and what is the vision for the project's overall impact?**

This project supports one of the priority issues in EPA's Innovation Strategy – restoring and maintaining water quality. It also demonstrates a diversified environmental protection approach using incentives and the principles of an EMS program.

Our plan is to use the pilot portion of the storm water project to demonstrate success with representatives of the construction, and manufacturing, industry sectors. After the pilot is successfully completed, we plan to open the participation to an entire industry sector, and then to the entire regulated community. Success within the storm water project will allow us to duplicate the EMS-based approach across other media, in other programs. It also would be readily transferable to other States.

**Link to one or more of EPA's 5 strategic goals**

The proposed project demonstrates a direct link to two of EPA's Strategic Plan goal areas:

Goal 2: Clean and Safe Water;

Objective 2.2: Protect Water Quality

Goal 5: Environmental Stewardship and Compliance;

Objective 5.2: Improve Environmental Performance through Pollution Prevention and Innovation;

Sub-objective 5.2.4: Environmental Policy Innovation.

**Innovative changes in management and regulatory processes**

The existing NPDES permitting system is self-reporting in nature, without having any incentives for permittees with proven compliance records. The Storm Water Excellence Program in Tennessee will be equally accessible to large corporations and small businesses, individual



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permittees and trade associations. Having limited resources for implementation and enforcement of storm water management programs, only a fraction of permitted sites can be inspected on regular basis by the Department's personnel. The selection of the sites to be inspected is essentially risk-based or complaint-based (size and nature of activity, receiving stream characteristics, etc.). Participation in the SWEPT program would essentially enable the Department to reduce the number of sites to be considered for compliance evaluation by assuming reduced risk of non-compliance. Consequently, our personnel will be able to focus on environmental issues for those permittees and at those sites that need additional prevention controls, resulting in increased compliance and reducing the overall loading of pollutants to the waters of the United States. Compliance will be evaluated based on routine and alternative tracking systems – Permit Compliance System data, internal storm water monitoring database, construction storm water compliance records, etc.

**How will the activities be accomplished? Target dates for key milestones. Specific information on how environmental outcomes will be measured and evaluated against current conditions (baseline).**

The approach for accomplishing goals of the EMS will be different for industrial and construction storm water programs.

### Industrial Storm Water Program

The current TMSP expires in December 2006. The new permit may include SWEPT provisions for qualified permittees. Some of the criteria that may be used for SWEPT qualification may include: approved and implemented ISO 14000 program; history of storm water monitoring below established TMSP benchmark values; satisfactory compliance evaluation inspection reports; commitment to external (third party) audits. Reduced frequency of storm water monitoring would provide a significant savings to permittees. According to our records, 1819 out of 2760 active permittees may qualify for reduced monitoring frequency based on the historic storm water monitoring data. The SWEPT could be implemented immediately following the issuance date of the new TMSP (December 2006).

### Construction Storm Water Program

The current construction storm water general permit became effective in 2005 and expires in June 2010. Some of the criteria that may be used for SWEPT qualification may include: approved and implemented ISO 14000 program; history of storm water inspections (self-reporting by a permittee or compliance evaluation inspection performed by Department's personnel) showing compliance with current permit conditions; satisfactory compliance evaluation inspection reports; commitment to external (third party) audits. Implementation of the SWEPT for construction storm water runoff would rely more on the associations and trade organizations (e.g., the Tennessee Home Builders' Association) to educate and organize constituents to obtain full compliance with the SWEPT requirements. Implementation of such program would be more iterative than the industrial storm water program. Existing construction storm water inspection reports can be used to establish a baseline for compliance. Qualified permittees would be subject



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to inspections and audits by an objective third party team, which would use the same criteria for evaluating compliance. The Department's personnel would, at a reduced frequency, confirm the findings of an independent audit team. We would utilize the assistance of our existing Construction Storm Water Task Force participants, including the Tennessee Department of Transportation, in crafting the details of the Excellence program, and in its implementation.

**Timelines for tasks, key activities for project completion, proposed start date and duration.**

<b>Activity</b>	<b>Projected date</b>
Kick-off of SWEPT with major stakeholders at the Construction Storm Water Task Force Quarterly meeting.	2 <sup>nd</sup> Qtr 2006
Selection of subcontractor to assist TDEC and the Task Force in designing the program and implementing the pilots.	2 <sup>nd</sup> Qtr 2006 – 3 <sup>rd</sup> Qtr 2006
Establish baseline for measuring storm water compliance, including scoring process for inspections.	Initiated in 2 <sup>nd</sup> Qtr of 2006; Completed in mid-2007
Work with stakeholders to establish EMS-based storm water standards and to educate the community about the SWEPT program.	Initiated in 3 <sup>rd</sup> Quarter 2006; Completed in 2 <sup>nd</sup> Quarter 2007
Reference SWEPT in the Multi-Sector Permit for industrial facilities.	December 2006
Work with the Task Force and the subcontractor to establish SWEPT pilot participants.	2 <sup>nd</sup> Quarter 2007
Initiate SWEPT pilot in both construction, and industrial, storm water sectors.	Mid-2007
Completion of pilots and report to EPA on results (posted on TDEC website).	End of 2008

**SWEPT Project Management**

SWEPT Project Management would include Vojin Janjic, Assistant Mgr. – TDEC Permits Section, and TDEC Environmental Protection Specialists, Jim McAdoo and Erin O'Brien. They function as the core of the NPDES General Permits group within the Permit Section and have written or reviewed every general permit currently issued by the division and nearly all of the industrial permits. They also have extensive experience in database development and data management.



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**Budget Summary**

[Withheld by EPA]

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