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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: 2003 Storm Water Compliance and Enforcement Strategy

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TO: Water Management Division Directors
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This memorandum transmits the final *2003 Storm Water Compliance and Enforcement Strategy (Strategy)* developed by the Office of Regulatory Enforcement and the Office of Compliance. We want to thank all ten Regions and the Office of Water for their active participation in the development of this strategy. This effort could not have been accomplished without their experience, knowledge, and expertise.

The purpose of this national strategy is to improve compliance with storm water requirements and protect our nation's waters from the harmful effects of polluted storm water. The NPDES storm water requirements have been in effect for more than ten years. However, EPA and state storm water inspection data reveal that a majority of industrial facilities inspected over the last ten years do not have an NPDES storm water permit. Moreover, there is significant non-compliance at permitted sites.

Storm water runoff is a major cause of water quality impairment. According to the *Report to Congress on The Phase I Storm Water Regulations* (U.S. EPA, 2000), urban storm

water runoff contributes to 13 percent of impaired river and stream miles, 21 percent of impaired lake acres, 55 percent of impaired ocean shoreline miles, and 46 percent of impaired estuary square miles. Storm water runoff can carry high levels of pollutants such as sediment, oil and grease, suspended solids, nutrients, heavy metals, pathogens, toxins, and trash into sewer systems and ultimately into our streams, rivers, lakes, estuaries, wetlands, and oceans. This creates an unhealthy environment for aquatic organisms, wildlife and humans (U.S. EPA, 1992, *Environmental Impacts of Storm Water Discharges: A National Profile*).

The *Strategy* was developed for use by EPA Regions. In addition, the Regions are encouraged to work with their states in adopting similar approaches to storm water enforcement. The IG Audit, "State Enforcement of Clean Water Act Dischargers Can be More Effective," noted the need for states to have more effective risk-based enforcement strategies to better protect human health and the environment and to meet the goals of the CWA. The *Strategy* anticipates a strong EPA/state partnership to address non-compliance with storm water requirements.

The *Strategy* provides two model storm water compliance and enforcement approaches for Regions and states to use in developing and implementing their own strategies to address this non-compliance problem. The first is a sector-based enforcement model which focuses on particular industrial sectors with low compliance rates. The second provides a watershed-based enforcement model which identifies a vulnerable watershed with significant impacts due to a variety of industrial storm water sources. Both models rely on risk-based targeting to identify industrial storm water discharges causing significant environmental impacts. The *Strategy* also includes: (1) a storm water training program for inspectors and enforcement officers; (2) a storm water expedited settlement offer program; (3) guidance for application of the CWA Penalty Policy to storm water cases; (4) field tools, such as inspector check-off sheets and compliance assistance material; and, (5) enforcement tools, including a legal forms database for storm water, enforcement strategies, and non-compliance scoring criteria. Finally, the *Strategy* discusses compliance and enforcement priorities for the Phase II storm water requirements which became effective in March 2003 (small construction and regulated small MS4s).

The *Strategy* reflects continuing work in the area of storm water enforcement. This effort has enjoyed steady support and participation by the Regions which is greatly appreciated. If you have any questions regarding this document, please contact Mark Pollins, Director, Water Enforcement Division at (202) 564-4001 or Jim Edward, Director, Compliance Assistance and Sector Programs Division at (202) 564-2462, or have your staff contact Lauren Kabler of the Water Enforcement Division at (202) 564-4052.

Attachment(s)

cc: Enforcement Coordinators, Regions I - X
Compliance Branch Chiefs, Regions I - X
NPDES Permits Branch Chiefs, Region I - X
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2003 Storm Water Compliance and Enforcement Strategy
A Strategy to Improve Compliance
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2003 Storm Water Compliance and Enforcement Strategy

“Smart Enforcement” for Storm Water

Introduction

Storm water runoff is a major cause of water quality impairment. According to the *Report to Congress on The Phase I Storm Water Regulations* (U.S. EPA, 2000), urban storm water runoff contributes to 13 percent of impaired river and stream miles, 21 percent of impaired lake acres, 55 percent of impaired ocean shoreline miles, and 46 percent of impaired estuary square miles. Storm water runoff can carry high levels of pollutants like mud and sediment, oil and grease, suspended solids, nutrients, heavy metals, pathogens, toxins, and trash into sewer systems and ultimately into our streams, rivers, lakes, estuaries, wetlands and oceans resulting in an unhealthy environment for aquatic organisms, wildlife and humans (U.S. EPA, 1992, *Environmental Impacts of Storm Water Discharges: A National Profile*).

The requirements for Phase I NPDES storm water permit application and coverage have been in effect for more than ten years. EPA and states have spent years educating industry about storm water compliance requirements (compliance assistance efforts include numerous training opportunities, storm water web sites, public service announcements, guidance documents, fact sheets, brochures, model permits and forms). Nonetheless, as of 2000 many industrial dischargers were still discharging storm water illegally.¹ In response, EPA shifted its focus in FY 2000 from outreach and compliance assistance toward increased enforcement for industrial dischargers across a targeted watershed, stream reach or geographic area or against a specific sector with potential for highly contaminated runoff (*see EPA’s 2000 Storm Water Enforcement Strategy Update* at <http://www.epa.gov/Compliance/resources/policies/civil/cwa/stmwtrstra.pdf>). The *2000 Strategy* encouraged regions and states to develop and implement watershed and sector-based storm water enforcement strategies. Few such strategies, however, have been implemented. Not surprisingly, compliance with industrial storm water program requirements is still poor.² EPA believes that compliance is poor due in large part to a lack of a pervasive field presence and subsequent enforcement response - factors necessary to establish motivation for the regulated community to come into compliance. Integrated strategies are effective in ensuring that the basic components of an effective compliance assurance program are realized and that the most appropriate compliance and enforcement tools are used to address the most significant problem. Therefore, in light of continued non-compliance with storm water program

¹This is not the case with large and medium Municipal Separate Storm Sewer Systems (MS4s). The initial enforcement priority for the storm water program (1994 - 1995 time frame) focused on bringing MS4s into compliance with application requirements. The result of this approach was a compliance rate of near 100% by the end of 1999.

²EPA and state inspections of industrial facilities indicate that a majority do not have a storm water permit - of the sites that do have a permit, non-compliance with the permit requirements is significant. EPA has estimated that approximately 75,000 industrial facilities (non-construction) have a permit, or about half of those required to have coverage, and about 20,000 construction sites apply for a permit in any given year, or about one-third of those required to apply (*Report to Congress on The Phase I Storm Water Regulations* (U.S. EPA, 2000)).

requirements across the country, the *2003 Strategy* requires that regions work to improve storm water compliance for industrial dischargers by developing and implementing a watershed-based storm water integrated compliance and enforcement strategy and/or a sector-based strategy within one year from the date of this document.

These strategies should follow an integrated approach to improving compliance. A copy of the *Framework for a Problem-Based Approach to Integrated Strategies* was sent to the regions under a cover memo dated November 27, 2002 and signed by JP Suarez, the Assistant Administrator for the Office of Enforcement and Compliance Assurance (OECA). While the regions' strategies will likely focus on targeted compliance monitoring and enforcement for Phase I sources, the strategies should provide a description of how the full mixture of tools (compliance assistance, compliance incentives, compliance monitoring, enforcement, and any other related activities) may be used to improve compliance. For Phase II requirements, which became effective in March 2003, the strategies may initially focus on compliance assistance, but again should consider all of the elements of an integrated strategy. For both Phase I and Phase II sources, the strategies developed by the regions should: discuss the goal of the strategy; address resources needed to implement the strategy; estimate a schedule for achieving the goals; include a discussion of how stakeholders may be involved and how the elements of the strategy will be communicated; and should include clear, measurable compliance and environmental outcomes under the Government Performance and Results Act (GPRA) and a description of the process to evaluate progress toward reaching these outcomes. Finally, these strategies should be incorporated into the MOAs between the regions and headquarters.

Parts I and II of the *2003 Strategy* provide two model storm water compliance and enforcement approaches for use by regions and states as they develop and implement their own strategies to address continuing non-compliance by industrial storm water dischargers. Regions are strongly encouraged to share the guidance and tools they are developing with their states. Part I provides a sector-based enforcement model; Part II provides a watershed-based enforcement model. Both models rely on a risk-based approach to address industrial storm water violations ensuring that those storm water dischargers that pose the most significant risk to the environment are addressed first. Part III highlights five new components of EPA's storm water enforcement program, including: (1) a storm water training program for inspectors; (2) a storm water expedited settlement offer program; (3) guidance for application of the CWA Penalty Policy to storm water cases; (4) compliance tools, like inspector check-off sheets and compliance assistance material; and (5) enforcement tools, like a legal forms database for storm water, enforcement strategies and non-compliance scoring criteria. Part IV discusses compliance and enforcement priorities for the Phase II Program (small construction and regulated small MS4s).

Part I
Model for a Sector-Based Approach to Compliance and Enforcement for Large-Scale Construction Activities

Background

Because compliance assistance and compliance incentive opportunities have been available for 8 - 10 years respectively for Phase I storm water sources and in order to address continuing non-compliance, the Office of Regulatory Enforcement (ORE) will focus storm water investigation and enforcement efforts on large-scale construction activities regulated under Phase I. In the process, ORE will implement a sector-based enforcement strategy that regions and states can use as a major element of the enforcement component of their own integrated strategy to address large construction sites, or other sectors of concern. Appendix A provides more details concerning why this sector was chosen.

Approach

Rather than trying to address the thousands of contractors operating each day, the Agency plans to focus its efforts on several large developers responsible for a majority of the nation's construction activities. These firms fall into two categories of large-scale construction operations: (1) commercial development of "big-box" stores and their associated developers, and (2) large national and residential developers.

This approach emphasizes three basic compliance monitoring and enforcement steps. The first step is to identify and prioritize appropriate corporate entities for investigation based upon best available information including inspections. Some of the factors that ORE will consider in developing the target list include: regional priorities and status of ongoing investigations, company compliance characteristics (*e.g.*, whether violations have been previously documented, the degree of environmental harm and whether such company has been put on notice regarding storm water requirements). The second step is to issue CWA §308 requests as necessary to the corporate headquarters of each of the large national construction firms identified for investigation.³ The purpose of ORE's information collection activities is to document and establish a trend of corporate-wide non-compliance by identifying ongoing and completed construction sites in non-compliance. After analyzing the responses to the §308 requests, ORE will ensure appropriate follow-up, for example, re-inspections, Notice of

Violation letters (NOV), Expedited Settlement Offers (ESO), or more formal enforcement

³ The Paperwork Reduction Act (PRA) does not apply to the collection of information during the conduct of an agency's investigation involving potential violations by specific individuals or entities. This exemption "applies during the entire course of the investigation . . . whether before or after formal charges or complaints are filed or formal administrative action is initiated, but only after a case file or equivalent is opened with respect to a particular party." 5 C.F.R. § 1320.4(c). ORE recommends that a separate physical or electronic case file be opened with respect to each individual party under investigation. (*See* "Enhancing the Effectiveness of Information Requests" memo issued by Eric V. Schaeffer, Director, Office of Regulatory Enforcement on July 3, 2001).

action, as necessary.⁴

Even though headquarters' led enforcement efforts are directed at large-scale construction operations at the national level, the approach is designed so that it can be easily tailored to address other sectors of concern by a region or state. Regions and states are encouraged to use this enforcement element of the sector-based strategy as a model when developing and implementing their own sector-based integrated strategy to advance storm water compliance. Additionally, the regions and states are encouraged to use the *Framework for a Problem-Based Approach to Integrated Strategies* when developing and implementing their specific strategies.

How will this approach advance storm water enforcement and compliance?

Through this approach, EPA will be able to address a significant percentage of construction activity occurring nationwide, while at the same time focusing limited EPA resources via risk-based targeting. A model §308 letter, inspection check-off sheet and inspection report appropriate for this type of approach have been developed by OECA and are available to the regions and states. In addition, the effort will send the message to operators that a national storm water enforcement presence exists and that EPA is dedicated to ensuring storm water program compliance. Finally, as part of this enforcement effort, large builders and developers found in non-compliance will be required to develop and implement corporate-wide comprehensive environmental management programs that ensure compliance with federal and state requirements before construction begins at any of their sites, nationwide.

How will the environmental benefits of these efforts be measured?

The Office of Water (OW), as part of the effluent limitation guidelines development for the construction and development point source category, is developing models to estimate sediment loading reductions at construction sites.⁵ These models will be used to estimate sediment loads reduced from construction sites as a result of enforcement responses. Additionally, sampling of specific impacted waterways to observe trends in the amount of pollutants of interest over time should be used where appropriate. Qualitatively, ORE will also evaluate the number of acres where the necessary erosion and sediment controls are implemented and maintained as a result of this effort. Other measures should be included as appropriate to show the environmental results of our efforts.

⁴ These particular cases will be developed through a coordinated effort between headquarters and the regions.

⁵ The Office of Water anticipates that these models will be finalized in FY 03.

Time Frame

1. Phase I (FY 2003/2004 1st quarter)
 - a. Risk-based targeting
 - b. Issue initial round of §308 letters
 - c. Review responses to §308 requests and determine appropriate enforcement response
 - d. Initiate enforcement
 - e. Continue compliance assistance and incentives as appropriate
2. Phase II (FY 2004)
 - a. Evaluate initial §308 process
 - b. Revise approach as necessary and initiate second round as appropriate
 - c. Complete initial round of enforcement actions

Part II:

Model for a Watershed-Based Approach to Compliance and Enforcement for Industrial Facilities Located in an Impaired Watershed

Background

In 2001 and 2002, OECA and Region III developed and implemented a watershed-based compliance and enforcement strategy for Phase I storm water facilities in the Anacostia River watershed, the *Anacostia Watershed Storm Water Enforcement Strategy*.⁶ The details of this strategy can be found in Appendix B.⁷ Examples of benefits and measures are described below.

How will this approach advance storm water enforcement and compliance?

The *Anacostia Strategy* relied on risk-based targeting allowing Region III to leverage limited resources and effectively focus enforcement efforts against numerous and varied polluters

⁶Contact Ingrid Hopkins in Region III or Lauren V. Kabler at headquarters to obtain a copy of the *Anacostia Strategy*.

⁷In April 2002, OECA published an *Enforcement Alert* highlighting the *Anacostia Strategy* and publicizing the importance of compliance with the storm water program.

in a watershed burdened with severe environmental threats. The *Anacostia Strategy* can be used as a model by regions and states as they develop their own watershed-based enforcement strategy for storm water. Various tools were developed and tested in this effort that will be useful to regions and states. The tools include: model inspection check-off sheets, compliance assistance material, approaches for identifying non-filers and non-implementers and targeting priority sectors, procedures for conducting storm water inspections, and legal forms.

How can the environmental benefits of this approach be measured?

The following three methods can be used to measure the environmental benefits of watershed-based approaches: (1) develop case studies for selected facilities (by sector) that compare conditions prior to enforcement and implementation of storm water controls to conditions at the site after enforcement and subsequent implementation of storm water controls (*e.g.*, compare pre-compliance conditions to post-compliance conditions); (2) compare individual activity measures (*e.g.*, number of inspections conducted) to outcome measures (*e.g.*, number of Notices of Intent, or NOIs, submitted) as a means of determining a trend toward compliance; and (3) develop quantitative measures based on pollutant reduction modeling data for industrialized areas from the National Urban Runoff Program (NURP). Additional measures may be included such as watershed monitoring for pollutants of interest.

Part III: General Activities

Specific tools to support this strategy are being developed by OECA and the regions. Each tool is summarized below. Details are provided in Appendix C.

A. Storm Water Training Program

ORE, along with the Office of Compliance (OC) and OW, have developed a storm water training program for new inspectors and enforcement officers. The expertise and resources of each office are used to provide comprehensive training to the regions and states on EPA's NPDES storm water permit requirements, inspection procedures and enforcement of storm water requirements. The training lasts four days (three days in a classroom, one day in the field) and has been conducted twice. The training materials, in electronic form, have also been circulated to the regions and several states for use in their own workshops.

B. Develop Expedited Settlement Offer (ESO)

Storm water cases often involve facilities or sites where the cumulative effect of discharges can have significant environmental impact. In storm water cases, issuing timely and consistent enforcement actions to compel compliance is necessary to achieve the goal of deterrence. This can be achieved through issuing an ESO. An ESO provides "real time" enforcement in situations where violations can be quickly corrected and a penalty collected within a short amount of time, generally a few months from EPA's discovery of the violation.

Experience shows that ESOs are extremely useful in addressing common, clear-cut violations that are relatively easy to correct. A joint regional and ORE workgroup has developed an ESO for construction sites.

C. Develop Guidance for Applying CWA Penalty Policy to Storm Water Cases

In determining the appropriate penalty for Clean Water Act (CWA) cases, the Agency is directed to follow the *Revised Interim Clean Water Act Settlement Penalty Policy*, dated February 28, 1995. This policy, which requires the calculation of economic benefit and gravity, works well for more traditional violations where there is an expectation of substantial capital expenditures and where the gravity elements are easily quantified. However, it is not so easily used for calculating penalties for storm water violations. In an effort to ensure that the penalty factors are applied consistently for storm water cases, EPA is developing guidance on how to apply the penalty policy gravity factors to storm water cases.

D. Develop Storm Water Compliance Assistance and Assessment Tools

Model compliance assistance tools will ensure that a consistent message is delivered to the regulated community to help them achieve compliance. Model compliance assessment tools will ensure that the information gathered by an inspector is adequate to determine whether an enforcement action is appropriate. They will also ensure that adequate data is collected to support an enforcement action if warranted.

Inspector check-off sheets for construction sites and industrial facilities have already been developed and are currently being used in the field. Other tools under development include: wireless and tiered inspector check-off sheets; a streamlined inspection report process; a comprehensive compliance assistance package; innovative ways to deliver compliance assistance materials to the regulated community; and a model tools database that will give regions and states access to storm water-specific compliance assistance and assessment tools.

E. Develop Storm Water Enforcement Tools

Model storm water enforcement tools will ensure that limited enforcement resources are maximized and that enforcement officers and inspectors have the tools they need to efficiently develop storm water enforcement cases where appropriate. EPA has developed draft non-compliance scoring criteria that will ensure appropriate enforcement against storm water violators nationwide. These criteria are currently being field-tested. EPA also plans to develop additional model enforcement strategies and a legal forms database. Finally, EPA is exploring the feasibility of delegating the authority to issue administrative orders to inspectors which will allow an inspector to immediately address environmental harm resulting from uncontrolled storm water runoff.

Part IV

Storm Water Phase II Compliance and Enforcement Approach

Background

The Phase II Storm Water Rule is the next step in EPA's effort to preserve, protect, and improve the nation's water resources from polluted storm water runoff. Phase II expands the Phase I program by requiring additional operators of small MS4s in urbanized areas and operators of small construction sites to implement programs and practices to control polluted storm water runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitats by controlling the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation.

The water quality impacts associated with uncontrolled runoff from construction sites are discussed in detail in Appendix A. The water quality impacts associated with storm water discharges from MS4s pose a serious threat to water quality. MS4s in urbanized areas are a concern because of the high concentration of pollutants found in these discharges to include: pesticides, fertilizers, oils, salt, litter and sediment. Concentrated development in urbanized areas serves to further exacerbate the situation by substantially increasing impervious surfaces, such as city streets, driveways, parking lots and sidewalks, on which pollutants from human activities settle and remain until a storm event washes them into nearby storm drains. Another concern is the possible illicit connection of sanitary sewers, which can result in disease-causing pathogens entering the storm sewer system. Storm water runoff picks up and transports these harmful pollutants - untreated - to waterways via storm sewer systems. When left uncontrolled, these discharges can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health. The Phase II regulations were published on December 8, 1999. Discharges under this program were required to have coverage under an NPDES permit by March 10, 2003.

Compliance and Enforcement Priorities

At the outset (FY 2003 - 2005), outreach and compliance assistance should be the primary method of encouraging facilities to comply with the permit application process and permitting requirements.⁸ A number of materials already exist or are under development and need to be marketed, particularly to the regulated community. The Construction Industry Compliance Assistance Center (cicacenter.org), which is run by the National Center for Manufacturing Sciences with OECA grant funds, is a web-based environmental compliance resource center that is being

⁸Identifying and acting against entities that have failed to either obtain or comply with a permit is not a priority activity for FY 2003 - FY 2005. However, there may be circumstances under which regions will want to closely monitor an entity's compliance with the storm water permit and take action for failure to comply with that permit (*e.g.*, egregious violators). Usually, this will be a case where non-compliance is contributing to an environmental problem in a high priority watershed. Discretion is left to the regions as to whether to take action in such a situation.

developed in close consultation with the construction industry. The center includes plain language regulatory explanations and links to construction stormwater resources including information and contacts regarding local regulations and permitting requirements. OC has established the National Compliance Assistance Clearinghouse (<http://cfpub.epa.gov/clearinghouse/>) which contains approximately 100 storm water assistance tools from EPA, states, and other organizations. The Clearinghouse has a search capability to assist municipalities in finding pertinent information. OC developed a Local Government Operations Sector Notebook in January 1999. Included in this notebook are sections that address construction/property management, wastewater management, water resources management, water supply and vehicle/equipment maintenance, all of which are related to storm water issues. In addition, OC will develop two checklists related to construction, complete a draft audit protocol for storm water, develop an expert system for storm water construction issues, and continue to update information on their web site and the Clearinghouse.

OW has engaged in numerous Phase II compliance assistance efforts over the past several years to include: developing a series of fact sheets, guidance documents, websites, and model permits and forms. Examples of ongoing outreach activities in regions and states include: storm water workshops conducted in coordination with trade organizations; updated websites containing fact sheets, guidance documents, forms and model SWPPPs; mass mailings of compliance assistance information (focus mailings in priority watersheds); meetings with local home builder associations; and, promoting incorporation of storm water program requirements information into state-sponsored contractor/builder/developer training programs.

Applying for a permit is a fundamental part of the Phase II storm water program. Failure to do so allows an MS4 entity or small construction site to escape regulatory scrutiny. Therefore, the secondary stage of compliance and enforcement priorities (FY 2005 - 2008) should include identifying those who have failed to submit a timely and complete permit application (*e.g.*, non-filers). The rationale for prioritizing non-filers for enforcement action is that those that have not begun any effort to comply will likely have few pollution control measures in place, thus posing a greater environmental risk than those who have made some effort to comply. Accordingly, in FY 2005, compliance and enforcement staff should shift away from intensive outreach and compliance assistance toward identifying and acting against non-filers. Priority should be given to small MS4s and small construction sites where non-compliance is harming the environment and/or public health.⁹ In FY 2008, regions should begin assessing compliance with permits (*e.g.*, conducting inspections, reviewing MS4 Annual Reports, DMRs, SWPPPs and other permit requirements) in order to identify and take action against small MS4s and small construction sites that are not complying with permit requirements (*e.g.*, non-implementers). Again, priority should be given to those entities posing the greatest risk to the environment and/or public health.

⁹The Office of Regulatory Enforcement, Enforcement Tools Workgroup, is developing a model Non-Compliance Scoring Criteria tool that will prioritize enforcement based on: status of the violator, recalcitrance, evidence of discharge to waters of the United States, level of BMP implementation, level of cooperation with permitting authority, degree of harm to the environment and/or public health, knowledge of regulatory requirements, etc.

As a general rule, the Enforcement Management System (US EPA, 1989) establishes the principle of escalation of enforcement response for continuing, uncorrected non-compliance. This storm water strategy recommends beginning with informal enforcement and escalating the severity of the response based on the degree of continuing harm/threat to the environment and/or public health. Beyond that, the selection of “who and where” is left to the discretion of the region. Finally, each region is required to develop and implement an enforcement strategy for small MS4s and small construction sites within one year from the date of this document.¹⁰

¹⁰The Office of Regulatory Enforcement, Enforcement Tools Workgroup, will develop a model enforcement strategy for small MS4s. Model enforcement strategies for construction activities are discussed earlier in this document.

Appendix A
Model for a Sector-Based Approach for Large-Scale Construction Activities
Detailed Problem Identification and Baseline for Construction

What are the water quality impacts associated with construction activity?

Storm water runoff from construction activities has a significant impact on water quality. Uncontrolled runoff from construction sites is a water quality concern because of the devastating effect that sedimentation has on local water bodies, particularly small streams. Numerous studies have shown that the amount of sediment transported by storm water runoff from construction sites with no controls is significantly greater than from sites with controls. The *2000 National Water Quality Inventory: 2000 Report* indicates that states, tribes, and territories reported that urban runoff, storm sewers and non-point source runoff contribute to bacteria deposition, oxygen depletion and increased turbidity and are the leading sources for impaired water quality in our rivers and streams. Uncontrolled erosion from construction sites is a significant source of sediment pollution to nearby streams. During storms, construction sites can be the source of sediment-laden runoff, often overwhelming a small stream channel's capacity, resulting in streambed scour, stream-bank erosion, and destruction of near-stream vegetative cover. Where left uncontrolled, sediment-laden runoff has been shown to result in the loss of in-stream habitats for fish and other aquatic species, and increased difficulty in filtering drinking water, the loss of drinking water reservoir storage capacity, and negative impacts on the navigational capacity of waterways. In addition to sediment, construction activities yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate storm water runoff. Total suspended solid (TSS) concentrations from uncontrolled construction sites have been found to be more than 150 times greater than concentration from undeveloped land (Horner et al., 1990; in CWP, 2000). Solids contribute to many water quality, habitat and aesthetic problems in our waterways, like increased turbidity and destruction of habitat for fish and bottom-dwelling organisms.

What is the profile of construction activity in the U.S.?

The construction industry is among the largest sectors in the national economy, accounting for approximately 4 percent of the U.S. gross domestic product. The construction industry disturbs an estimated 2.2 million acres of land each year in the nation (USDA, 1999). Much of that activity is due to commercial and residential development, as well as heavy construction of roads and highways, sewer systems and bridges. While hundreds of thousands of contractors are operating at any given time, a significant amount of new construction in the United States is conducted by a relatively limited number of large national firms. For instance, it is common for large commercial retail chains to build more than one hundred new stores each year. With respect to residential development, a study conducted by the Census Bureau found that approximately 40 percent of new home construction is conducted by large builders, those building more than 100 units per year.

How are construction activities regulated under the NPDES Storm Water Program?

In 1990, EPA promulgated regulations requiring operators of construction activities disturbing five (5) or more acres of land to obtain authorization to discharge storm water under an NPDES industrial storm water permit. (40 CFR 122.26(b)(14)(x)). The regulations established what is referred to as Phase I of the Storm Water Program. Because of the large number of regulated activities, EPA and states rely on the use of general NPDES permits to provide permit coverage for storm water discharges from construction activities. The primary focus of EPA and state issued general permits are the development and implementation of Storm Water Pollution Prevention Plans (SWPPPs). Developed by a site operator, a SWPPP identifies structural and non-structural controls that will be used at the construction site to, among other things, minimize erosion and discharges of sediment to receiving waters. These controls are often low-technology and low-cost like good housekeeping, employee training, and material handling procedures.

What is the compliance status of the regulated construction activities?

Since 1992, EPA and states have implemented a number of compliance assistance activities to communicate the regulatory requirements of the Storm Water Program to trade associations, contractors and developers. Guidance documents on the proper design and implementation of sediment and erosion controls, and training materials for construction operators are widely available. The Office of Wastewater Management website helps operators identify whether or not they need a permit and provides state contact information and copies of EPA and state storm water permits, application forms and other technical guidance (see <http://www.epa.gov/npdes/stormwater>). In addition, the new Construction Industry Compliance Assistance Center (<http://www.cicacenter.org>) provides quick access to compliance tools, contacts and experts via links to EPA and state web sites. Despite these outreach efforts, compliance with the storm water program is generally reported as poor.

In a 2000 Report to Congress, EPA estimated that the total number of construction activities in the U.S. subject to Phase I of the Storm Water Program exceed 62,000 starts per year (USEPA, 2000). Yet a survey of states found that less than 20,000 construction sites actually applied for permit coverage in 1999. Data from EPA and state inspections of construction sites report similar findings. Inspectors report that roughly 50 percent of the construction sites inspected do not even have permit coverage. Of the sites that have applied for permit coverage, non-compliance with permit requirements remains significant.

Past Efforts to Achieve Compliance

In the Summer of 2001, EPA settled a national enforcement action against Wal-Mart for violations of storm water requirements under the Clean Water Act. The alleged violations occurred at 17 Wal-Mart construction sites in Texas, New Mexico, Oklahoma and Massachusetts. The settlement commits Wal-Mart to develop and implement a comprehensive environmental management plan to increase compliance at each of the store's construction sites nationwide

through additional inspections, training, record keeping and implementation of Best Management Practices.

Building on the Wal-Mart case, ORE, in July 2001, distributed letters to other national members of the retail, development and construction industry to inform them of the recent civil judicial settlement with Wal-Mart, and to highlight the need to ensure compliance with the CWA. In addition, the letter also included a copy of EPA's Audit Policy "*Incentives for Self-Policing: Discovery, Disclosure and Prevention of Violations.*" To date, there have been no specific inquiries to the Agency under the Audit Policy. Nonetheless, significant non-compliance with storm water requirements at construction sites continues.

Appendix B
Model for a Watershed-Based Approach for Industrial Facilities
Detailed Problem Identification and Baseline for a Watershed

What are the water quality impacts associated with industrial activity (non-construction)?

Activities that take place at industrial facilities like auto salvage yards, airports, marinas, waste transfer stations, cement and asphalt manufacturers, and recyclers are often exposed to storm water. The runoff from these activities discharges industrial pollutants into nearby storm sewer systems and water bodies. Polluted storm water runoff from industrial activities has a significant impact on water quality, contributing pollutants like oil, grease, toxic chemicals, heavy metals and floatables into streams, lakes, rivers, bays and oceans. High levels of pollutants negatively impact the integrity of aquatic ecosystems resulting in beach closures, shellfish bed closures, limits on fishing, limits on recreational contact, compromised drinking water supplies, and aesthetic impact.

What is the profile of industrial activity (non-construction) in the U.S.?

While eleven categories of "storm water discharges associated with industrial activity" require an NPDES industrial storm water permit, information related to the specific number of industrial facilities that actually meet the definition of these categories is not available. This is because only a percentage of any given category is required to obtain coverage under an NPDES storm water permit. For example, any industrial facility that discharges storm water to a publicly owned treatment works or to a combined sewer is not covered by the storm water regulations. Also, a number of heavy industrial facilities have storm water discharges covered under an existing individual NPDES permit that includes both process wastewater and storm water controls. EPA tracks these individual NPDES permits separately, and thus they are excluded from the count of covered facilities in the database. Additionally, light industries are required to obtain permit coverage only if the industrial activity is exposed to storm water. Therefore, a much smaller percentage of light industrial facilities are required to obtain storm water permit coverage.

Due to the complex permitting criteria, it is difficult to definitively quantify an exact profile of industrial activity in the U.S. EPA has estimated that there exist about 445,000 industrial activities (excluding construction) that have the potential to meet the definition of storm water associated with industrial activity. However, the number of industrial activities that actually have a storm water discharge associated with industrial activity (based on regional and state inspection data) is estimated at more than 150,000.

How are industrial activities regulated under the NPDES Storm Water Program?

In 1990, EPA promulgated regulations requiring operators of industrial facilities included in one of the 11 categories of "storm water discharges associated with industrial activity" (40 CFR 122.26(b)(14)(i)-(xi)) that discharge storm water to a municipal separate storm sewer system

(MS4) or directly to waters of the United States to obtain authorization under an NPDES industrial storm water permit. Because of the large number of industrial activities, EPA and states have largely relied on the use of general NPDES permits to provide permit coverage for storm water discharges from industrial dischargers. The primary focus of EPA and state-issued permits is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Generally developed by a site operator, a SWPPP identifies structural and non-structural controls that will be used at the industrial site to, among other things, minimize discharge of pollutants to receiving waters. These controls are often low technology and low cost approaches like good housekeeping, employee training, and material handling procedures.

What is the compliance status of the regulated industrial activities?

One of the biggest challenges is to ensure that all of the hundreds of thousands of potential facilities with storm water discharges associated with industrial activity are covered by a storm water permit. EPA and states have implemented numerous compliance assistance activities to communicate the regulatory requirements of the Storm Water Program to the regulated universe. Guidance documents on the proper design and implementation of a SWPPP have been developed and are widely available. The Office of Wastewater Management website helps operators identify whether or not they need a permit, provides state contact information, copies of EPA and state storm water permits, application forms and other technical guidance (see <http://www.epa.gov/npdes/stormwater>). In addition, (OC) has established the National Compliance Assistance Clearinghouse (<http://cfpub.epa.gov/clearinghouse/index.cfm?Tab=Home>) which provides quick access to compliance tools, contacts and experts via links to EPA and state websites.

Despite continued EPA and state outreach efforts, compliance with the storm water program is generally reported as poor. Data from EPA and state inspections of industrial sites indicate that a majority of industrial facilities/sites inspected do not have an NPDES storm water permit. Less than half (approximately 75,000) are currently permitted, which is far less than the number of facilities that require authorization under an NPDES industrial storm water permit. Of the sites that have applied for permit coverage, non-compliance with permit requirements remains significant.

Local Watershed-Based Strategy: Target Industrial Facilities Located in an Impaired Watershed for Investigation (e.g., Anacostia River Watershed)

The Anacostia River Watershed reaches upstream from the District of Columbia into suburban Maryland, covering approximately 170 square miles of land in two counties and DC. It drains one of the most densely populated sections of the metropolitan DC area. With a population of more than 800,000, the watershed faces typical pressures associated with an urbanized area - pollution, development and encroachment upon natural resources. Once open spaces have been transformed by agriculture and urbanization resulting in heavy sediment deposition, high toxic and nutrient loads, floatable debris, habitat degradation, and stream-bank erosion. According to the *Biennial Federal Workplan for the Anacostia River Watershed*, April 22, 1997, the Anacostia has “been severely impaired as a result of storm water runoff.” In 1999, ORE and Region III

developed and implemented the *Anacostia Watershed Storm Water Enforcement Strategy* (*Anacostia Strategy*), a risk-based targeting strategy to address storm water violators located in the watershed.

The *Anacostia Strategy* contemplates four basic steps. The first step is to identify the impaired watershed. EPA identified the Anacostia River as an impaired watershed based on a number of factors: (1) existence of a high human health and ecological risk factors based on fish advisories; (2) bio-assessment survey data, and various other impaired watershed indicators like toxic contamination of sediments (PCBs), loss of natural habitat, high rate of disease-causing pathogens, high urban storm water runoff, and low dissolved oxygen; (3) location near an Environmental Justice area; (4) frequent use for recreational and subsistence fishing; and, (5) identification as a priority watershed by the Chesapeake Bay Executive Council, the White House Task Force on Ecosystem Management, and the non-profit environmental group, American Rivers.

The second step is to use various information sources to establish the non-filer/non-implementer universe. EPA used the following sources to identify the universe in the Anacostia River watershed: Dunn's & Bradstreet database; electronic yellow pages; DeLorme Street Atlas; permit application databases; citizen complaints; Federal (US Park Service, Department of Agriculture, and the Arboretum) and state resource trustees (MD, DC, VA environmental agencies); and police units (DC Metropolitan Environmental Crimes Unit).

The third step is to prioritize the non-filers and non-implementer universe according to environmental risk to the watershed. EPA determined that (1) facilities with Standard Industrial Classification (SIC) code sectors with potential for highly contaminated runoff (*e.g.*, transportation facilities), (2) industries with pollutants exposed to rainfall (*e.g.*, concrete and asphalt facilities), and (3) region III's priority industrial sectors (*e.g.*, auto salvage yards, marinas, transportation sectors) posed the greatest threat of environmental harm to the Anacostia River watershed.

The fourth step is to investigate and take appropriate enforcement action. EPA sent out more than 1000 storm water outreach letters to the non-filers/non-implementers identified above providing notice of EPA's storm water program requirements. EPA conducted approximately 200 inspections at sites where no, or an inadequate, response was received. EPA reviewed the inspection reports and ranked them according to non-compliance scoring criteria (*e.g.*, whether there was an NPDES permit, SWPPP, evidence of discharge, BMP implementation, etc.). Enforcement actions were initiated against twenty seven "high scorers" (twenty three administrative orders, three administrative penalty orders, and one civil judicial referral).

Currently, EPA is implementing the second phase of the *Anacostia Strategy*. Re-inspections of all twenty seven sites where enforcement actions were previously taken have been conducted. A majority of these sites were found to be in compliance requiring no further action. However, enforcement is planned for several sites based on continued non-compliance and threat of environmental harm to the watershed.

Appendix C Development of Compliance and Enforcement Tools

A. Develop Expedited Settlement Offer (ESO) for Storm Water (construction)¹¹

Storm water cases often involve facilities or sites where the cumulative effect of discharges can have significant environmental impact. In storm water cases, issuing timely and consistent enforcement actions to compel compliance is necessary to achieve the goal of deterrence. This can be achieved through issuing an expedited settlement offer (“ESO”) pursuant to the revisions to the “*Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits*” (“*Consolidated Rules*”), 40 C.F.R. Part 22, particularly 40 C.F.R. § 22.13(b).¹² An ESO provides “real time” enforcement in situations where violations can be quickly corrected and a penalty collected within a short amount of time, generally a few months from EPA’s discovery of the violation.

The revisions to Part 22 provide a less resource-intensive mechanism for processing widespread violations associated with relatively small penalty amounts. Relatively limited penalty amounts are contemplated by this approach in keeping with the nature of the violations and the violator. The size of the penalty for each violation is important to the success of an expedited settlement program. Penalties that are relatively high may discourage violators from settlement and may reflect factors that make application of an offer of rapid settlement inappropriate. On the other hand, penalties need to be high enough to catch the attention of other violators and provide the levels of specific and general deterrence so needed in this area.

The purpose of expedited settlements is to supplement, not replace, the traditional administrative and judicial enforcement options. The program enables the regions to establish a credible and pervasive field presence. Traditional enforcement actions should be pursued for all violations where an expedited settlement is not adequate to address the level of non-compliance or the nature of the violator (*e.g.*, where there is a significant environmental harm, large economic benefit, repeat violator), or where the violator declines the offer for expedited settlement.

In an effort to ensure that storm water enforcement is timely, consistent and widespread, a joint ORE and regional workgroup has developed a draft ESO for construction sites. The workgroup has developed the following tools to support this effort: an ESO field test procedure; an inspection check-off sheet; a penalty calculation worksheet; an ESO settlement agreement; and

¹¹EPA has decided to limit ESOs to construction sites and auto salvage yards (see timeline for development) because these entities often involve facilities or sites where the cumulative effect of discharges can have significant environmental impact.

¹²The ESO is a settlement approach and the ESO worksheet is not intended , and should not be used as, the basis for a penalty demand in an administrative penalty hearing or a judicial trial. The ESO settlement penalty is not intended for use by EPA, defendants, respondents, courts, or administrative law judges at a hearing or in a trial. Further, whether the Agency decides to use the ESO approach is purely within EPA's discretion.

criteria determining which sites are eligible for an ESO. Sites that meet all of the following criteria can be ESO-eligible: (1) construction sites up to 50 acres; (2) sites where the penalty calculated via the ESO worksheet is no more than \$15,000; (3) sites where there is no evidence of significant environmental impact (e.g., turbidity observed in receiving water); (4) sites where the operator is a first-time violator; and (5) sites where there are no non-allowable storm water discharges (e.g., a process wastewater discharge such as truck washing or discharge from a concrete batch plant operation). After one year of implementation, ORE will evaluate the effectiveness of the ESO for storm water and make any changes that may be needed to ensure the continued usefulness of this tool.

Time Frame

1. Phase I (FY03)

Develop expedited settlement process (“ESO”) for construction and model forms

Field test ESO for construction

Conduct evaluation and revise as necessary

Finalize and distribute ESO for construction to regions in summer 2003

2. Phase II (FY 04)¹³

Develop ESO for auto salvage yards and model forms

Field test ESO for auto salvage yards

Conduct evaluation and revise as necessary

Finalize and distribute ESO for auto salvage yards to regions

B. Develop Guidance for Applying CWA Penalty Policy to Storm Water Cases

In determining the appropriate penalty for CWA cases, the Agency is directed to follow the *Revised Interim Clean Water Act Settlement Penalty Policy*, dated February 28, 1995. This policy, which requires the calculation of economic benefit and gravity, works well for more traditional violations where there is an expectation of substantial capital expenditures and where the gravity elements are easily quantified. It is not so easily used for calculating penalties for storm water violations.

¹³The ESO workgroup will first determine whether an ESO for auto salvage yards is feasible prior to its development. If it is not feasible, other industrial categories will be considered.

In an effort to ensure that the penalty factors are applied consistently for storm water cases, EPA has created a joint ORE and regional workgroup to develop guidance(s) on how to apply the penalty policy gravity factors to storm water cases. The workgroup will focus predominantly on the B (health and environmental harm) and D (significance of non-effluent limit violations) factors of the penalty policy. Initially, the workgroup plans to treat each type of storm water violator (industrial, construction and MS4) separately. After completing that effort, if it is found that the types of violations overlap, the workgroup will consider an integrated policy for all types of violations.

Time Frame

1. Phase I (FY 03/FY 04 1st quarter)

Review existing penalty policy guidance

Develop & distribute draft guidance for construction storm water violators for review & comment

Review comments and revise guidance

Distribute draft guidance for construction storm water violators for field testing

Evaluate draft guidance for construction storm water violators and revise as necessary

2. Phase II (FY 04)

Develop and distribute draft guidance for industrial storm water violators for review & comment

Review comments and revise guidance

Distribute draft guidance for industrial storm water violators for field testing

Evaluate draft guidance for industrial storm water violators and revise as necessary

3. Phase III (FY 05)

Develop & distribute draft guidance for MS4 violators for review & comment

Review comments and revise guidance

Distribute draft guidance for MS4 storm water violators for field testing

Evaluate draft guidance for MS4 storm water violators and revise as necessary

Issue final guidance(s)

C. Develop Storm Water Compliance Assistance and Assessment Tools

A joint OC and regional workgroup has been established to develop compliance assistance and assessment tools that will improve compliance and develop a database that will give regions and states access to these tools. Model compliance assistance tools will ensure that a consistent message is delivered to the regulated community to help them achieve compliance. Model compliance assessment tools will ensure that the information gathered by an inspector is adequate to determine whether an enforcement action is appropriate. They will also ensure that adequate data is collected to support an enforcement action if warranted.

Several model compliance assistance tools will be developed by the workgroup. First, the workgroup will develop a comprehensive compliance assistance package. The components will be gathered from the extensive array of already developed compliance assistance materials and will be supplemented by materials developed by the workgroup, like an inspection check-off sheet that will help the regulated community determine whether they are in compliance.¹⁴ Second, the workgroup will focus on innovative ways to deliver compliance assistance tools to the regulated community (*e.g.*, provide building permit offices with a compliance assistance package for storm water to be handed out to every applicant for a building permit).

Two model compliance assessment tools have already been developed, an inspector check-off sheet for construction sites and an inspection check-off sheet for industrial facilities. Other compliance assessment tools are planned for development. One example is a tiered check-off sheet which will shorten the time the inspector spends in the field (*e.g.*, check-off sheets will be tiered to a specific kind of inspection - “screening” inspection check-off sheet appropriate where an inspection will be followed up with a §308 letter vs. a comprehensive inspection check-off sheet where no further information gathering is contemplated). Another example is wireless PDA-compatible inspection check-off sheets which will streamline the inspection report process. Upon return to the office, the inspector will download the inspection check-off sheet completed in the field onto their PC. An inspection report will be generated automatically upon download. Inspectors will have the option of adding narrative comments.

Time Frame

1. Phase I (FY03, FY 04 1st quarter)

Solicit model tools from regions and states for model tools database and create distribution method (ongoing)

¹⁴The compliance assistance package will also be supplemented with materials currently being developed as described in Part IV.

Develop tiered inspector check-off sheets

Field test tiered inspector check-off sheets

Conduct evaluation and revise as necessary

Finalize and distribute to regions

2. Phase II (FY 04)

Develop wireless inspector check-off sheets

Field test wireless inspector check-off sheets

Conduct evaluation and revise as necessary

Finalize and distribute to regions

Develop streamlined inspection report process

Pilot streamlined inspection report process

Conduct evaluation and revise as necessary

Finalize and distribute to regions

Develop compliance assistance package

Conduct evaluation and revise as necessary

Finalize and distribute to regions

D. Develop Storm Water Enforcement Tools

A joint ORE and regional workgroup has been developing tools that will help enforcement officers do their job more effectively and efficiently. First, the workgroup has developed draft non-compliance scoring criteria for construction sites. Non-compliance scoring criteria helps an enforcement officer determine the appropriate level of enforcement for a specific violation. It will promote consistent, concerted enforcement from region to region for storm water violations. The draft non-compliance scoring criteria is currently being field-tested via paper-based case studies. Second, the workgroup will continue to develop and promote the use of sector-based, watershed-based and other types of risk-based storm water enforcement strategies. Storm water strategies facilitate the leveraging of limited enforcement resources. Third, the workgroup will develop a model legal forms database. This database will give regions and states access to storm

water-specific legal forms that can be quickly tailored to fit various types of storm water enforcement scenarios. The database will include: storm water outreach letters, notices of non-compliance, notices of violation, administrative orders, administrative penalty orders, expedited settlement offers, civil judicial referrals and consent decrees. Fourth, the workgroup will explore the feasibility of delegating the authority to issue administrative orders to inspectors. This delegation will allow an inspector to address environmental harm resulting from polluted storm water discharges immediately.

Time Frame

1. Phase I (FY03/FY 04 1st quarter)

Revise non-compliance scoring criteria

Field test non-compliance scoring criteria

Conduct evaluation and revise as necessary

Finalize and distribute to regions

2. Phase II (FY 04)

Develop/ compile model forms database

Distribute to regions

Explore delegation of authority for inspectors

Secure delegation authority from management as appropriate