Storm Water Permitting: A Guide for Builders and Developers, First Edition

Amy C. Erickson, Marilyn Parson, Ph.D., Kimberly Porter, and Susan Asmus, editors

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HOW TO USE THIS GUIDE

- Where do I begin if storm water permitting is new to me? Carefully read Chapters 1 to 6. These chapters provide important background information on the federal laws that are behind the storm water permitting rules, plus critical information on how to comply with the requirements of the storm water permitting program. There are even examples of what EPA will look for when an inspector comes to your site in Chapter 5.

- What if I've had storm water permits in the past, but need a refresher course? Focus your attention on Chapters 5-6. These chapters contain the essential elements of compliance with the storm water permitting requirements.

- And if I already know about the storm water permitting requirements that apply to me? Don't miss Chapters 5 and 6. Chapter 5 gives tips on compliance, and Chapter 6 introduces methods that can be used to incorporate storm water management into the land planning process.

- What's a SWPPP? If this is a new term for you, you are definitely not ready for an EPA inspector's visit. But you can change this by thoroughly reading Chapter 4. Chapter 4 addresses the "heart" of the storm water permitting program: the Storm Water Pollution Prevention Plan, or "SWPPP." EPA accepts nothing less than full compliance with all of the SWPPP requirements. Included in this chapter are SWPPP preparation checklists, sample SWPPPs, and sample inspection reports.

- How do I know I'm using the right BMPs for my site? Review Appendix A to locate Best Management Practices (also known as "BMPs") that may be suitable to use on your sites, and read those sections more thoroughly. These sections contain technical information, such as cost data, performance measures, and specifications for installation and maintenance.

- What if my state runs my storm water permitting program? Get your state's permitting program information from the CD-ROM located in the back of Storm Water Permitting. Appendix C. There is a folder for each state that operates its own permitting program and had a final general permit in place as of September 2005. If you build in Alaska, Idaho, Massachusetts, New Hampshire, New Mexico, or the District of Columbia, where US EPA administers the storm water program, check out your state folder for your requirements. In each folder, you'll find the state's or EPA's general permit, Notice of Intent and other forms, and guidance materials created. Permit information is not provided for Nebraska, Oregon, South Carolina, Vermont, Washington, and Wisconsin. As of September 2005 these states had not yet adopted Phase II construction General Permits, and because information is likely to change in the near future it is recommended that, for permit information for these states, you seek information directly from the state permitting department.

- Want to know more about what happens during an inspection? Read "How Builders & Developers Should Handle an Inspector's Visit," an article originally published in Land Development Magazine. You'll find this article in Appendix E. Remember, EPA can visit and enforce storm water permitting requirements regardless of whether or not your state runs your permitting program.

- What are my options if EPA discovers a violation on my site? Appendices G through P consist of EPA documents that concern inspection and enforcement activities, including inspector worksheets and self-reporting incentive policies that EPA has made available to people who discover storm water violations through their own investigation.

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Source citations signify the following references:


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INTRODUCTION

Builders and developers face a barrage of federal, state, and local regulations concerning the control of storm water runoff. In many instances, compliance with these mandates is demanding work. Builders and developers, most of whom operate small businesses, often do not have the resources necessary to hire experts, yet need assistance in understanding not only the requirements associated with storm water discharges, but also the latest planning and development techniques they may use to comply with these requirements.

Nonetheless, there is a growing understanding among builders of the nature and cause of storm water pollution that is changing the way they plan and build housing projects. The result is an increase in environmentally sensitive construction, an increase in the numbers that a developer can provide to home buyers, and ultimately, a decrease in water pollution.

The National Association of Home Builders (NAHB), a federation of more than 800 state and local associations nationwide with a total membership of over 215,000 member firms, is dedicated to serving the needs of individual members and state and local affiliates. As the "Voice of America's Housing Industry," NAHB provides technical and management services to state and local associations and keeps members and associations informed about changes in construction technologies, environmental issues, legislation, government regulations, consumer attitudes and preferences, and other specialized fields particular to the housing industry.

As land developers and builders, NAHB members are involved in construction activities that may affect the environment. Construction activities may alter stream flow or impact water quality through the introduction of pollutants, such as sediment, into waterbodies. The control of storm water discharges, therefore, must be an integral part of the home building industry. This pollution potential is why the U.S. Congress directed the U.S. Environmental Protection Agency (EPA) to develop a permit program that addressed storm water pollution. Since 1999, EPA has required general permits for storm water discharges from construction sites, industrial facilities, and municipal separate storm sewers (MS4s). Therefore, not only is it environmentally desirable to control storm water runoff, it is required by the Clean Water Act.

NAHB has been actively involved in storm water pollution issues since the passage of the Federal Water Pollution Control Act Amendments in 1972. The Association has consistently supported EPA's efforts to develop general permits for construction activities under the National Pollutant Discharge Elimination System (NPDES) program, and has provided technical comments and sampling data to support the development of these permits.

The purpose of this guide is to familiarize builders and developers with their obligations under the storm water permitting program, and to provide background information on the evolution of the storm water regulations and the impact that sediment can have on waterbodies and aquatic life. This guide is not intended to be a substitute for legal or professional advice. Much of the information in this guide is applicable to different state permitting programs, but each delegated program has different requirements and procedures. Furthermore, regulations and permits are subject to change, and builders and developers should consult their permitting authority and legal counsel to ensure that they are complying with current requirements in their jurisdictions.

What is Storm Water Runoff?

Storm water runoff is water from rain or snowmelt that flows off the land surface from impervious surfaces or that cannot be absorbed by the soil. As the runoff flows over the land surface, it often picks up pollutants such as sediment, nutrients, pathogens, organic materials, and debris. These materials are then frequently deposited into a nearby receiving waterbody.

Storm water runoff has been classified into two types, point source and nonpoint source, depending on its flow path and discharge characteristics. The key to these different classifications is whether the discharger must obtain an NPDES permit for the storm water discharge.

- A point source discharge is broadly defined as that runoff which is conveyed by any discernible, confined, and discrete conveying system, including but not limited to pipes, ditches, channels, tunnels, wells, or other conduits from which pollutants are or may be discharged. Point source discharges are most commonly associated with wastewater treatment plants, municipalities and industrial facilities. Construction sites where one or more acres of land are disturbed for a single project and single lots within a subdivision that is larger than one acre are usually considered to be a point source.
- Storm water runoff from some sources does not need a permit. These are referred to as nonpoint sources. Nonpoint source runoff is defined as any source of pollutant that does not meet the definition of a "point source," although nonpoint source flow can be diffuse or concentrated. Nonpoint source discharges are frequently associated with agriculture and forestry activities.

What are the Impacts of Storm Water?

Storm water runoff can be responsible for notable changes in both water quality and water quantity if not properly controlled. As development occurs, pervious, undeveloped areas are converted to land uses that typically have increased areas of impervious surfaces, resulting in increased surface runoff rates, volumes, and pollutant loads. This can cause flooding, erosion, and water quality degradation that reduces aesthetic appeal and land values.

Water Quality

Once every two years, EPA is required under section 305(b) of the Clean Water Act to submit to Congress a report that evaluates the quality of the nation's surface waters. Completed with the help of the states, the report is to provide a national assessment of surface water impacts associated with runoff from various land uses. The most recent report, entitled "The National Water Quality Inventory, 2000 Report to Congress," concludes that storm water runoff from a number of diffuse sources, including agriculture, urban runoff and storm water runoff conveyed through municipal separate storm sewers, is a leading cause of water quality impairment cited by states. Table 1-1 contains the...
leading sources of water quality impairment that EPA identified in its 2000 Report to Congress.

Water Quantity

Water supply and the character of water flow are significantly impacted by urban development if uncontrolled. As urbanization occurs, asphalt and buildings replace vegetation and natural land contours are destroyed. This alteration can result in:

- Increased peak discharges compared to preddevelopment levels resulting from decreased infiltration rates and reduced overland flow time;
- Increased volumes of surface runoff due to the decreased infiltration rates;
- Acceleration of peak discharge rates of storm water due to channelization and efficient urban conveyance systems, causing stream bank erosion, sedimentation, and changes in habitat and aquatic life;
- Greater runoff velocity during storms due to the combined effects of higher peak discharges, rapid time of concentration, and the smoother surfaces that occur as a result of development; and
- Decreased stream flow during periods of dry weather due to the reduced level of infiltration.

These factors can also lead to increased incidences of flooding, stream channel erosion and associated property destruction. The adverse effects, however, can be minimized and mitigated if storm water management practices are properly designed and installed.

Storm Water Pollutants

Pollutants in storm water come from a variety of sources. Each pollutant can affect water in various ways, depending on the pollutant’s composition and characteristics.

Sediment

Sediment consists of tiny soil particles that are washed or blown into streams and lakes, and is often the major pollutant by volume in surface waters. Sediment can fill in road ditches, streams, rivers, lakes and wetlands, can bury crops and lawns and kill trees, and can smoother fish and bottom-dwelling organisms. Suspended sediment can cause water to look cloudy or turbid, and can restrict the penetration of light. Fine sediments also act as vehicles to transport other pollutants, including trace metals, nutrients, and hydrocarbons to nearby surface waters.

Sources Related to Urbanization or Development:
- Runoff from construction sites. Average sediment loading rates from construction sites vary greatly, and the loadings can be substantial. Many of the loading rates cited from development activities, however, fail to take into account the usual short duration that disturbed soil is exposed to rainfall at a construction site.
- Stream bank erosion. Stream bank erosion can be accelerated by increases in peak rates and volumes of runoff due to urbanization. When this occurs, the sediment load within a stream is increased.

- Sand applied for de-icing. Sand that is applied to a road surface for de-icing is frequently carried to surface waterbodies via snow- or ice-melt runoff.
- Runoff from storm water control facilities. Improperly designed, installed or maintained erosion and sedimentation and/or storm water management facilities may contribute significant amounts of sediment.

Nutrients

Nutrients, primarily nitrogen and phosphorus, can have significant impacts on surface waterbodies. Excessive nutrient loadings to aquatic ecosystems can cause excessive plant growth and algal blooms, which accelerates the process of eutrophication ("dying" of lakes). The ammonium form of nitrogen can also decrease the amount of dissolved oxygen within a waterbody.

Sources Related to Urbanization or Development:
- Improper or excessive use of fertilizers
- Organic matter such as lawn clippings and leaves
- Atmospheric deposition from smokestacks and car exhaust

Oxygen-demanding Substances

Maintaining proper levels of dissolved oxygen are critical to maintaining water quality and aquatic life. Decomposition of organic matter by microorganisms may deplete dissolved oxygen levels and result in waterbody impairment. Urban runoff can deposit large quantities of decaying organic matter in lakes and streams, which can severely decrease dissolved oxygen levels after storm events.

Sources Related to Urbanization or Development:
- Pet wastes
- Tree litter
- Organic matter such as lawn clippings and leaves

Trace Metals

The most common trace metals found in urban runoff are lead, zinc and copper, followed by chromium, cadmium and nickel. As the metals corrode, dissolve or settle out, small amounts are carried away by wind or water and can concentrate in surface runoff. Trace metals can degrade water quality due to their toxic effects on aquatic life and pose potential contamination threats to groundwater.

Sources Related to Urbanization or Development:
- Pesticides and herbicides
- Fallout from automobile emissions and industrial smokestacks
- Household substances, including paint, varnish, and cleaning materials
- Landfills

Oil and Grease

Automobile oil and other lubricants are commonly found in storm water. Oil and grease and other petroleum-derived substances contain hydrocarbons. These materials initially float on the water, but because they have an affinity for sediment, they quickly become attached to it. The substances are then transported with the sediment and settle out with it. Hydrocarbons have been found to be toxic to aquatic organisms at relatively low levels, and may be transferred through the food chain.

Types of Storm Water Pollutants

- Sediment
- Nutrients
- Oxygen-demanding substances
- Trace metals
- Toxic substances
- Oil & grease

Table 1-1 Leading Sources of Water Quality Impairment

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<td>Municipal Point Source</td>
<td>Hydrologic Modification</td>
<td>Resource Extraction</td>
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Sources Related to Urbanization or Development:
- Spillage at oil storage and fueling facilities
- Leakage from crankcases
- Improper disposal of oil

Overview of Erosion and Sedimentation Processes

**Erosion** is the removal of soil by water, wind, ice and gravity. Most natural erosion occurs at slow rates. However, when land is altered by clearing or other disturbance and not restabilized, the rate of erosion increases.

Raindrops strike the soil at a speed of approximately 25 to 30 feet per second. The impact of the raindrop causes particles of soil to become detached and splash into the air. After the soil particles become dislodged, they can be carried off by surface runoff. Surface runoff begins when the soil is saturated and can no longer absorb the falling rain. Scouring of the exposed soil by runoff can cause more erosion. As the runoff increases, it tends to be concentrated into rivulets and then into channels. As the speed of the runoff increases, more soil particles are transported. The six main types of erosion are illustrated in Figure 1-1 and discussed below.

**Raindrop Erosion**
When the vegetative cover is removed or destroyed, the soil is directly exposed to the impacts of raindrops. The soil particles separate as raindrops strike the bare soil. The pounding action of the rain destroys the soil structure. As the soil dries, a hard crust often forms. This crust slows plant establishment and reduces water infiltration and thereby increases future runoff and erosion. The rate of raindrop erosion is related to rain intensity and raindrop size. Some splashed particles may rise as much as 30 inches and move as much as 60 inches horizontally. On a slope, particles will move down the slope because of gravity.

**Sheet Erosion**
Water flowing over the surface of the soil is referred to as sheet erosion. The shallow moving sheets of water are not usually a detaching agent, but the flow of water does transport soil particles that have become detached by raindrop impact. Shallow water usually moves as a uniform sheet for only a few feet before concentrating in low spots and other surface depressions.

**Rill Erosion**
Rill erosion begins when the shallow flow begins to concentrate in the low areas of the soil surface. When the flow begins to change from a sheet flow to a deeper flow in the low areas, the turbulence and velocity of the water increases. This deeper flow now has the energy to both detach and transport soil particles. The small channels cut into the soil surface by this action are called rills. For the most part, rills are only a few inches deep but are well-defined.

**Gully Erosion**
Gullies are formed when runoff cuts rills deeper and wider, or when two or more rills are combined together. Gullies can become enlarged either up or down slope. In some soils, a heavy rain can change a rill into a major gully in a very short time. Gullies are difficult to stabilize and costly to control.

**Channel Erosion**
Channel erosion occurs when the velocity of the flow in a stream is increased or when the bank vegetation is damaged or destroyed. This type of erosion is most common at bends in the stream or where the flow is restricted. Damage may also occur where storm drainage is discharged into the main stream. Stream banks are difficult and expensive to repair.

**Wind Erosion**
As wind blows across a sparsely or unvegetated surface composed of loose sediment, dust is introduced into the air. Dust generally originates from inorganic particulate matter from rock and soil surfaces, material storage piles, and construction materials. Wind erosion is most commonly associated with earth moving activities, construction traffic, and wind action over disturbed, compacted surfaces.

**Sedimentation** is the process of depositing or settling out of soil particles that are transported by water after being eroded from the land. Sedimentation occurs when the velocity of water in which soil particles are suspended is slowed sufficiently to allow particles to settle out. Larger particles, such as gravel and sand, settle more rapidly than finer particles such as silt and clay.

Effective construction site management first minimizes excessive soil erosion by keeping the soil stabilized as long as possible, then directs runoff from the remaining disturbed areas to management facilities that remove the sediments prior to the runoff's discharge into surface waters.

Factors Affecting Runoff and Erosion

Erosion processes are natural processes that are accelerated by human activities. The amount of runoff and erosion that occurs due to any given storm event will vary depending on the combination of the following factors:

**Soil Type**
The soil type will determine how vulnerable the soil is to erosion. Properties influencing how easily soil erodes include texture, structure, organic matter content, and permeability (the ease at which water may pass through a soil). The most erodible soils generally have a texture that contains a high percentage of fine sand and silt. Because of the small size of these particles, they are easily eroded by wind or water.

The structure of the soil, or the way in which the particles are arranged, also influences erodibility. Spheraloid soils are typically subject to wind and rapid erosion. The presence of clay or organic material tends to decrease erodibility as clays are sticky and tend to bind soil particles together, resisting erosion. While clays generally resist erosion, however, they are easily transported once they have eroded. The permeability of the soil is also an important indicator of erosion.

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1 Because sediment is the major constituent within warm water discharges from construction sites, the final segments of this chapter focus on soil erosion processes.
Soils that are very permeable (where water flows freely through the soil) generally do not experience as much erosion as those soils that are less permeable. This is primarily due to the fact that when water cannot penetrate the ground, it becomes runoff, which often encourages erosion. Well-graded and well-drained gravels are usually the least erodible soils.

- **Climate**
  Rainfall characteristics such as frequency, intensity and duration directly influence the amount of runoff that occurs. As the frequency of rainfall increases, water has less of a chance to drain through the soil between storms. When this happens, the soil will remain saturated for longer periods of time, and the volume of storm water runoff may be greater.

Likewise, the rainfall from higher intensity storms reaches the ground with higher velocities, thereby generating more erosion. Longer storm events also increase the erosion potential simply due to their duration. Erosion risks, therefore, are highest where rainfall is frequent, intense, or lengthy.

- **Vegetative Cover**
  Vegetative cover is an extremely important factor in reducing erosion, as vegetation protects soil from the forces of raindrop impact and run-off scours. The visible vegetation protects the soil surface from the raindrop impact, while the root mass holds the soil particles in place. Vegetation also counters erosion by slowing the speed of runoff.

  Considerable amounts of rainfall are used by vegetation for both growth and transpiration. When vegetation is removed, both the amount of water used and the amount lost to evapo-transpiration is decreased, and the amount of runoff generated is increased. Vegetation also contributes to a soil’s ability to absorb water, to filter and use the elements suspended or dissolved within it, and to transport waters to groundwater aquifers.

  Elimination of vegetation effectively decreases the soil’s ability to hold and process water, and may result in a decrease in groundwater recharge. Further, when the land loses its capacity to absorb and store rainwater, the groundwater table drops and stream flows decrease during dry weather.

- **Topography**
  Slope length and steepness influence both the volume and velocity of surface runoff. Long slopes generally produce more runoff to the bottom of slopes while steep slopes increase runoff velocity. Both types of slopes increase the potential for erosion to occur. Areas with little topographic relief pose the least threat of erosion.

- **Season**
  Seasonal variation in temperature and rainfall changes the erosion potential during the year because temperature has a major influence on soil erosion. Although frozen soils are relatively erosion resistant, high erosion potential may exist in the spring when the surface soils first thaw and the ground underneath remains frozen. The occurrence of a low intensity rain during this time may cause serious erosion because the frozen subsoil prevents water infiltration. Erosion increases during the summer months because of more frequent, intense rains.

- **Degree of Urbanization**
  One of the first observed and most notable effects of urban development is the alteration of storm water flow. As urban development occurs, asphalt and concrete replace vegetation and open lands. As a result, infiltration decreases, which causes an increase in the amount of runoff and an acceleration of the peak discharge rate, as seen in Figures 1-2 and 1-3.
Chapter II

FEDERAL PROGRAMS RELATED TO STORM WATER RUNOFF

This chapter provides a brief overview of the federal laws that form the basis of the storm water permitting program, as well as historical background on the evolution of the federal environmental statute that protects surface waters in the U.S., the Clean Water Act. Additionally, this chapter provides an introduction to other statutes that carry requirements for builders and developers who request coverage under a construction general permit, such as the Safe Drinking Water Act and the Endangered Species Act.

The Evolution of the Clean Water Act

Federal Water Pollution Control Act of 1948

The Federal Water Pollution Control Act (FWPCA) of 1948 was the first comprehensive federal water quality law enacted. The basic structure of the Act requires the use of water quality standards to define allowable levels of water pollution and the allocation of allowable pollution among dischargers through permits has been retained in the Clean Water Act since 1948.

The Federal Water Pollution Control Act of 1972

The Federal Water Pollution Control Act Amendments were passed in 1972 with a declared goal to "restore and maintain the chemical, physical and biological integrity of the Nation's waters." The Amendments also took the 1948 law one step further by creating the first Congressionally mandated national permit program for controlling water pollution.

Amendments to the Federal Water Pollution Control Act (1977): The Clean Water Act

The 1977 amendments to the FWPCA renamed it the Clean Water Act (CWA) and changed the regulatory focus from the sources of water pollutants to the nature of the pollutants themselves. Accordingly, the U.S. Environmental Protection Agency (EPA), which administers the bulk of the CWA, and the states, who may be delegated the authority to administer portions of the Act, focused on the control of the discharge of process waste waters from industrial and municipal sources. Over the years, these sources have greatly reduced their discharges consistent with the intent of the CWA.

After the initially targeted sources were under control, Congress and the agencies broadened the scope of regulation to focus on more diffuse sources, including storm water discharges, runoff from municipalities and nonpoint discharges including urban runoff. Significant amendments were made again in 1987 regarding the control of toxic and nonpoint source pollutants.

The three main programs addressing storm water and urban runoff are:

- **CWA Section 319**: Nonpoint Source (NPS) Management Programs. This section requires states to address nonpoint sources of pollution by developing and implementing assessment and management programs. Section 319 also directs EPA to provide technical assistance to the states and to make grants available to the states to assist them in implementing the required management programs.

- **CWA Section 401**: Water Quality Certification Program. Section 401 requires states to certify that water quality degradation will not occur as a result of any project that requires a Federal permit or license and that may result in a discharge to waters. Section 401 requires any application proposing "any discharge" into navigable waters to obtain a certification from the state that the discharge complies with all applicable effluent limitations and water quality standards.

- **CWA Section 402**: National Pollutant Discharge Elimination System (NPDES). The purpose of the NPDES program, created by Congress in 1972, is to improve water quality by prohibiting the discharge of pollutants into "waters of the United States" without a permit. The NPDES program has been most frequently associated with controlling "point source" discharges originating from industrial processes and municipal sewage treatment facilities. However, as early as 1973, EPA identified certain classes of storm water discharges as "point sources," and in 1984, after years of litigation and study, EPA issued NPDES permit regulations for storm water runoff from virtually all development projects in the nation. In 1987, Congress recognized the lack of comprehensive requirements for storm water discharges and diffuse pollutant sources, and amended the CWA to clarify its applicability to storm water discharges and to require EPA to establish requirements for controlling storm water runoff (both point and nonpoint) from virtually every source in the nation. Congress also directed EPA to develop a phased approach to controlling storm water discharges under the NPDES program.

  - **Phase I**: In 1990, EPA published initial permit application requirements for Phase I storm water discharges. Phase I was defined as those discharges associated with industrial activity, discharges from municipal separate storm sewer systems serving a population of 100,000 or more, and clarified that storm water discharges associated with construction activities, such as clearing, grading and excavating, were to be regulated. Coverage under the Phase I storm water permit was required by October 1, 1992. All owners or operators of storm water discharges from large or medium municipalities, industrial activities or construction activities which disturb 5 or more acres of land or less than five acres within a common plan of development or sale were required to apply for an NPDES permit.

  - **Phase II**: In December 1999, EPA published Phase II of its storm water regulations, extending permitting requirements to storm water discharges from construction sites where one or more acres of land is disturbed, or less than one acre within a common plan of sale or development, e.g. a subdivision. "Small" municipal separate storm sewer systems, servicing populations of at least 10,000, are also required to obtain coverage under a general permit. The Phase II regulations required these dischargers to obtain coverage under a general permit as of March 10, 2003.

Other Federal Laws That May Be Applicable

**Clean Water Act, Section 404 Permits for Dredged or Fill Material**

This section of the Act prohibits the discharge of dredged or fill materials into "waters of the U.S." without a permit. The U.S. Army Corps of Engineers (The Corps) has interpreted waters of the U.S. to include certain wetlands. To obtain a section 404 permit, an applicant must show that there is no "practicable alternative" to impacting the wetland and that the discharge of material will not cause significant degradation of the aquatic ecosystem. A section 404 permit may be required if the installation or operation of storm water Best Management Practices (BMPs) may result in the discharge of material into a wetland.

**Safe Drinking Water Act of 1974**

The purpose of the Safe Drinking Water Act (SDWA) is to protect the public from contamination of public water supplies. It requires EPA to issue drinking water regulations, including health-based standards, for contaminants, which are to be enforced by the states. In order to meet those standards, the Act regulates the construction of wells, pumping of wastes through the ground into injection wells, and the discharge of storm water runoff into aquifers. Approval under the SDWA may be required for the operation of Best Management Practices (BMPs) that rely on infiltration or otherwise discharge into groundwater, because they may qualify as "Class V injection wells" under...
the Safe Drinking Water Act. A rough guideline is that if an infiltration device is deeper than it is wide, the device may qualify as a Class V well. If a BMP qualifies as a Class V well, the operator must complete a registration form and submit this to the Underground Injection Control program office for that jurisdiction. If it is suspected that a BMP needs to be registered, the operator should contact the Underground Injection Control program office to make the determination. Program contact information is located in Appendix B.

Coastal Zone Management Act (CZMA) of 1972
Congress enacted the Coastal Zone Management Act (CZMA) in 1972 in response to concern about the resources of the coastal zone. The Act establi\shed a program to encourage states to voluntarily develop comprehensive programs to manage and protect coastal resources and provide federal assistance to these programs. Water quality protection was not specifically included as a purpose or policy of the statute until 1990, when the Act was reauthorized. Congress promulgated a new program within the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 to address point source pollution. Similar to the CWA Section 319 Program, Section 6217 of the Coastal Zone Act Reauthorization Amendments directs states to develop and implement state coastal nonpoint pollution control programs.

Wild and Scenic Rivers Act of 1968
This Act is designed to protect rivers and sections of rivers in their free-flowing condition, devoid of interference from dams or other construction. Rivers protected by the Act are chosen based on considerations of water quality and conservation of the "scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values" that these rivers possess. The construction of storm water control facilities and the discharge of storm water into rivers designated under the Act may be severely restricted or prohibited.

Endangered Species Act of 1973
The goal of the Endangered Species Act (ESA) is to protect threatened and endangered plant and animal species from extinction. Section 7 of the Act requires that any action authorized, funded, or carried out by a federal agency underwrite the use of the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service to ensure that the action is unlikely to jeopardize the continued existence of any endangered or threatened species or result in the destruction of the species' critical habitat. Only federal projects and those projects requiring federal permits are subject to Section 7. Regardless of federal agency involvement, landowners everywhere are subject to the take prohibitions of Section 9, and any activity proposed for a site that contains threatened or endangered species may be affected by the Act's requirements. Section 9 of the Act states that it is unlawful for any person to "take" any listed species anywhere in the United States. "Take" is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or in any way disturb the species or its habitat. If there is no federal connection, and the activity may result in the take of an endangered or threatened species, you may need an incidental take permit under Section 10. EPA's Construction General Permit requires site operators to certify and document either that no listed endangered or threatened species are located on or near the project area, or that, if listed species are located on or near the site, that the construction activity will not adversely affect the listed species. If your project is in a state where EPA is the permitting agency, refer to Appendix D for information on how to satisfy the documentation of permit eligibility related to endangered species requirements.

Clean Water Act, Section 303 TMDLs
The Clean Water Act requires states, territories, and authorized tribes to establish water quality standards for waters under their jurisdiction and to provide a list of waterbodies for which existing pollution controls are not stringent enough to attain and maintain water quality. These waterbodies are referred to as "impaired waters." States, territories, and authorized tribes are also required to prepare Total Maximum Daily Loads (TMDLs) for waters on this "impaired waters" list. A TMDL can be broadly defined as a quantitative assessment of a water quality problem. The TMDL for a specific waterbody provides the basis for attaining or maintaining water quality standards by identifying the maximum amount of a particular pollutant that may be present in a waterbody. A separate TMDL is required for each pollutant resulting in a water quality standard violation. TMDLs allocate the allowable pollutant loads or discharges among point sources (in form of wasteload allocations) and nonpoint sources (in the form of load allocations). EPA's Construction General Permit requires permit applicants to determine whether storm water discharges from the site are consistent with pollutant loads for any TMDLs established for the receiving waterbody for the types of pollutants typically found in discharges of storm water from construction sites, e.g. sediment. Applicants must record the findings in the Storm Water Pollution Prevention Plan (SWPPP). EPA makes the assumption that where a TMDL addresses a pollutant that may be found in storm water discharges, but does not include a specific allocation for storm water discharges, compliance with a SWPPP satisfies the requirements of the TMDL. Several states also have similar requirements for applications with storm water discharges to waterbodies for which a TMDL has been created.
Chapter III

OVERVIEW OF NPDES PROGRAM REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

What Activities are Regulated?
Under current Federal law and EPA/state regulations, all owners and/or operators of storm water discharges from industrial activities identified in 11 EPA categories must operate pursuant to a National Pollutant Discharge Elimination System (NPDES) permit, or risk Clean Water Act penalties. The regulations define "storm water discharges associated with industrial activity" to include storm water discharges from construction activities (including clearing, grading and excavation activities) that result in the disturbance of one or more acres of total land area, including areas that are less than one acre, but are part of a larger common plan of development or sale that involves one or more acres.

When is Your Construction Site Part of a Common Plan of Sale or Development?

- The plan includes any announcement or document such as a sign, public notice, hearing, sales pitch, advertisement, zoning request; or physical demarcation, such as boundary signs, lot stakes or surveyor markers that indicate construction activities may occur on a specific plot.
- Even where most of a subdivision has been completed, but where isolated residential lots remain vacant, if the total area of expected disturbance on these remaining lots is one acre or more, then construction on any of the remaining lots must be covered by a construction general permit.
- A city's master plan or zoning map is not a plan of sale or development.
- Once the homeowner or tenant occupies a home, any future construction activity on the site is not part of the original plan of sale or development.
- When the total expected acreage disturbed falls below one acre, the builder can build on the remaining lot(s) without permit coverage. However, the builder may not terminate permit coverage and discontinue compliance activities on lots that are still under construction.

"An original common plan of development for a residential subdivision might lay out the streets, house lots, and areas for parks, schools, and commercial development that the developer plans to build or sell to others for development. All these areas would remain part of the common plan of development or sale until the intended construction occurred. After this initial plan has been completed for a particular parcel, any subsequent development or redevelopment of that parcel will be regarded as a new plan of development."


Construction operations that result in the disturbance of less than one acre of total land and that are not part of a larger common plan of development or sale may still be required to obtain coverage under an NPDES permit if EPA or the state permitting agency determine that the construction operations pose a significant threat to water quality.

Program Administration

EPA administers the NPDES program under the Clean Water Act. However, a provision in the CWA allows states to request authorization to administer the NPDES program instead of the EPA. Upon EPA's approval of the state plan, the state becomes responsible for issuing permits and administering the NPDES program. To date, forty-five states have assumed this authority and are termed NPDES delegated states. In these states, dischargers must comply with state-issued general or individual permits. Table 3-1 above contains the forty-five states that administer their own storm water permitting programs.

The remaining five states – Alaska, Idaho, Massachusetts, New Hampshire, New Mexico – as well as the District of Columbia, are non-delegated, and fall under EPA's general permitting authority for storm water discharges.

Dischargers in these non-delegated states must comply with EPA's regulations, which mandate that baseline requirements be met. The NPDES programs of the delegated states must also be consistent with EPA's minimum federal requirements, although they may always be more stringent.

EPA has encouraged the delegated states to use the federal program as a model when developing their state plans. Yet, because of the states' ability to tailor the plan to specific issues, practices or requirements of the state, the resulting programs range from those that essentially mirror the federal program to those that are quite different. Many local authorities also have erosion and sediment control ordinances, which may impact the activities of a discharger and the permitting process.

Types of Permits

Two kinds of permits are issued under the NPDES program. One is an individual permit tailored to fit the specific requirements of a particular facility, while the second, a general permit, provides umbrella-like coverage to a large number of similar facilities.

- Individual Permits

Individual permits are site specific and are issued to a single facility for storm water discharges related to its industrial activity. In most instances, this permit is tailored to meet the discharge characteristics of the permittee and/or the special requirements of the receiving waterbody through the implementation of special conditions or discharge requirements.

Individual permits are required in those instances where the discharge does not fall within the eligibility requirements set by the general permit, or where a general permit is denied. Some categories of storm water discharges have no choice under NPDES regulations but to obtain individual permits. These include:

- Discharges for which an individual NPDES permit for storm water discharges has already been issued; and
- Discharges that the EPA or NPDES state approved authority has determined are contributing to the violation of water quality standards, are a significant contributer of pollutants to waters of the U.S., or which enter into a high quality waterbody with special protection.
CHAPTER III

Construction General Permit Requirements

Who must file for a permit?

The operator of a construction site where one or more acres will be disturbed on the site or a lot less than one acre that is within a common plan of development or sale (e.g., subdivision) that totals one acre or more. The operator must submit the Notice of Intent (NOI) for coverage under the general permit. An operator is defined as a person who either has operational control over the construction plans and specifications, including the ability to make changes to those plans and specifications (i.e., owner or developer of the project); or a person who has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a Storm Water Pollution Prevention Plan (SWPPP). In many cases, more than one person at a site will be considered an operator and must submit an NOI. EPA will allow one person to assume the role of site operator and submit the NOI, depending on how the owner of the project chooses to structure the contracts between all of the parties working on the site.

Application Requirements

To qualify under a construction general permit, the applicant must first prepare a SWPPP and then submit a NOI. Each delegated state's NOI may contain different requirements. However, there is significant commonality between the state NOIs and EPA's. For example, EPA's NOI requires the following information:

- Operator's name, address, telephone number and IRS Employer Identification Number
- Description of the construction site, including the address, county, and latitude/longitude
- Verification that the Storm Water Pollution Prevention Plan (SWPPP) has been prepared in advance of filing the NOI and the location of where the plan can be viewed
- Name(s) of the “water of the United States” that the construction site runoff discharges into; or if the site discharge will go through a municipal separate storm sewer system (MS4), the NOI must include the name of the water that the MS4 discharges into
- Statement that the discharge is consistent with the requirements of any Total Maximum Daily Loads (TMDLs) completed for the waterbody receiving the discharge ("receiving water") that address a pollutant associated with the construction site (i.e. sediment)
- Estimated, approximate project start and completion dates and estimated number of acres of the site where soil will be disturbed
- Statement describing the presence of any listed threatened or endangered species or designated "critical habitat" that are located close to the construction project, and a statement on how the operator has satisfied the requirements concerning endangered species and therefore be eligible to obtain coverage under the CTP
- Signature, with name and title of the authorized representative (as defined by EPA in the CTP), and date of signature

EPA operates an online NOI processing center that allows applicants to submit their NOIs electronically, and to view their authorization to discharge electronically. Once the NOI is submitted, construction activities are authorized to begin seven days after the filing date. The applicant should check EPA's electronic NOI ("eNOI") processing center web site (http://www.epa.gov/npdes/stormwater/enoi) to ensure that authorization to discharge has been granted. In delegated states, construction site operators need to submit their NOIs to the state permitting agency (i.e. the state's Department of Environmental Protection), and most states do not offer electronic NOI submission. The time period between NOI submission and authorization to discharge varies from state to state.

Overview of the Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan, or "SWPPP" contains the specific practices the operator will apply to the site and the associated paperwork that must be routinely completed in order to satisfy the permit requirements. The SWPPP must contain a description of the site and the activities conducted on the site, and must describe the Best Management Practices (BMP) that the operator will use to reduce pollutants in storm water discharges. Examples of controls that must be addressed in the SWPPP include descriptions of the temporary and permanent stabilization practices that will be used (e.g., seeding of vegetation, geotextiles, vegetative buffer strips, and preservation of trees); and structures that divert flows of storm water or treat storm water on-site (e.g. silt fences, inlet protection, sediment traps, and sediment basins). The SWPPP also contains inspection and maintenance requirements.

EPA's Construction General Permit requires that the SWPPP also contain documentation of how the operator determined that the site activity will not adversely affect federally-listed endangered or threatened species. The operator must also describe how he/she determined that storm water discharges from the site are consistent with pollutant loads for any TMDLs established for the receiving water for the types of pollutants typically found in discharges of storm water from construction sites (e.g. sediment).

Inspections must be conducted on the schedule set by the permitting authority. EPA's Construction General Permit grants the operator a choice of inspecting either every 7 days or every 14 days and after a storm event of 0.5 inches or greater. EPA requires that a person qualified to assess the conditions at the construction site and evaluate the effectiveness of the sediment and erosion control measures employ the inspections. States may have different requirements on who may conduct inspections. The inspection is to be a visual inspection of the site, storage areas, sediment and erosion control measures and vehicle entries and exits to the site. The qualified person must complete a report after each inspection, and maintain the inspection
Other Compliance Requirements

- EPA and many states require that a copy of the NOI must be posted at the construction site.
- EPA and many states require that a copy of the SWPPP must remain on the site or at an
  identified, accessible location.
- Discharges of many non-storm water discharges are prohibited except in certain circumstances.
- The permit does not relieve the permittee from any responsibilities, liabilities, or penalties
  resulting from the need to report the release of hazardous materials.
- The permittee shall retain copies of the SWPPP, inspection reports and all related documentation
  for a period of three years from the date the site is finally stabilized, usually coinciding with the
  date that the permittee submits a Notice of Termination.

Chapter IV

STORM WATER POLLUTION PREVENTION PLANS

The Storm Water Pollution Prevention Plan, or "SWPPP," serves two main purposes. First, it provides
a site description that identifies sources of pollution to storm water discharges associated with
industrial activity onsite, and second, it identifies appropriate measures that must be implemented to
reduce pollutants in storm water discharges in order to ensure compliance with the permit
requirements. Ideally, the planning for pollution prevention measures should be completed at the
same time that the construction plan is developed. If concurrent completion is not possible, a
SWPPP can be prepared for most construction sites by using information from the existing design,
and modifying the design to accommodate the controls. In any event, a SWPPP must be prepared
before beginning construction and submitting a Notice of Intent (NOI), and then updated when
necessary. Responsibility for developing a SWPPP typically lies with the owner of the property that is
being developed, or with the owner and operator (i.e., general contractor) of the construction project.

EPA considers the Storm Water Pollution Prevention Plan to be the "heart" of compliance with the
Construction General Permit and views an incomplete or inaccurate SWPPP as a significant violation
of the permit requirements. EPA may assess substantial penalties against a builder or developer who
does not prepare a SWPPP, or prepares a SWPPP that lacks the specified requirements. EPA made a
policy decision against requiring costly sampling and analysis of storm water discharges. Instead, EPA
implemented inspections and record keeping requirements to ensure that inspection occurred and
that detected problems were resolved. Therefore, strict compliance with the SWPPP specifications is
critical to ensure compliance with the Construction General Permit and avoid costly fines.

Site Evaluation

The initial step in plan preparation is to gather information on the site where construction is to take
place. The information obtained should be plotted on a map and explained in the narrative portion
of the SWPPP. Such information should include:

- Topography: A topographic map that shows the existing contour elevations should be obtained
  and/or prepared. The map should also identify any existing drainage features such as swales,
  ditches or natural drainage features. The scale of the map should be small enough so that
  important features can be easily distinguished.
- Soils: The type of soils present on the site should be determined and identified on the site map.
  This may be done by using the National Resource Conservation Service's Soil Surveys.
- Landscape: Features such as existing structures or other impervious surfaces, vegetation, rock
  outcrops and water features (streams, lakes wetlands) should be shown on the plan, including
  areas adjacent to the development site.
- Name of Receiving Waterbody: For storm water leaving the site, the waterbody(s) that are to
  receive the runoff must be identified. If the receiving water is a tributary, the ultimate body of
  water should also be identified. Receiving waters may include rivers, lakes, streams, creeks, runs,
  estuaries, wetlands, bays, oceans, etc. If the site drains into a municipal separate storm sewer
  system, identify the system and indicate the receiving waterbody to which the system discharges.
- Rainfall Data: Determine the amount of rainfall expected at the site for use in designing storm
  water management measures.
Preliminary Site Plan Development

After collecting the site information, a preliminary site plan should be developed for the proposed construction project. In preparing the plan, one should strive to:

- Reproduce pre-development hydrological conditions;
- Limit development and construction activities to the least critical areas;
- Design erosion and sediment and storm water management controls to fit the site conditions, thereby limiting the amount of cut and fill;
- Preserve and utilize natural drainage features;
- Prevent runoff from offsite areas from flowing across disturbed areas;
- Slow down the runoff flowing across the site;
- Minimize the amount of disturbed soil;
- Remove sediment from onsite runoff before it leaves the site;
- Minimize paved areas/other impervious surfaces; and
- Cluster buildings together.

Developing the Storm Water Pollution Prevention Plan

Once the preliminary plan for the site development is complete, a plan for the control of runoff from the site must be prepared. This plan is commonly referred to as a Storm Water Pollution Prevention Plan, although it may also be referred to as an Erosion and Sediment Control Plan. Alternatively, in some jurisdictions, an Erosion and Sediment Control Plan is a distinct document and a requirement separate from a Storm Water Pollution Prevention Plan. The following preliminary steps should be taken in designing erosion and sediment controls and storm water management facilities for a proposed plan:

- Determine the limits of clearing and grading;
- Determine the site area, the drainage area and how runoff will travel over the site; and
- Calculate the runoff coefficient. Once the layout of the streets and buildings are known, the amount of storm water runoff generated can be calculated by comparing the amount of built to unbuilt surface. This information is then used to determine the sizing and design of erosion and sediment controls such as silt fences and sediment traps, and post-construction storm water management facilities such as swales and retention ponds. An easy way to calculate the peak runoff using the rational method is presented below.

Calculating the Amount of Runoff Using the Rational Method

The rational formula estimates peak runoff rates from data on rainfall intensity and drainage basin characteristics. This method is generally used for areas of less than 200 acres, but is frequently used for basins of up to one square mile and is a widely accepted method for the design of storm water control facilities.

\[
Q = CIA
\]

Where

\[
Q = \text{the maximum amount of runoff in cubic feet per second}
\]

\[
C = \text{the average runoff coefficient for the entire site}
\]

\[
I = \text{the intensity of rainfall in inches per hour}
\]

\[
A = \text{the total area to be drained in acres}
\]

- Average Runoff Coefficients (C). Average runoff coefficient (C) takes into account the amount of water that runs off the different surfaces of a site. Each type of surface has a runoff coefficient that corresponds to the amount of water that runs over the surface compared with the amount that infiltrates the surface. Tables 4-1 and 4-2 show the average values for a variety of different types of surfaces.

- Intensity of Rainfall (I). As part of calculating the total amount and rate of storm water runoff for any given site, the intensity of the rainfall (I) in that area must be known. The intensity of rainfall refers to the amount of rain in inches per hour that falls during a certain period of time for a selected location and type of storm. Storms classified as 2-, 5-, 10-, 25-, 50-, and 100-year storms are commonly considered important for site design purposes. A 100-year storm means that a storm of this intensity has a one percent chance of occurring in any given year. State or local guidelines should be consulted to determine the correct design storm for use in obtaining the value for the intensity of rainfall. Most residential projects use either a 10- or 25-year design storm. Rainfall intensity charts can be obtained from the local weather bureau or county engineer's office.

- Runoff Generated (Q). The value calculated for Q using the rational formula represents the total amount of runoff in a certain period of time that a project would generate on a chosen site. This result (Q) is also used in other formulas to size swales and retention and detention systems and gives a general idea of how much area is needed to contain the runoff on site. This, in turn, provides an estimate of the amount of developed surface area a given site can support.

For larger sites it usually necessary (or required by some states) to use a more complicated method, such as using TR-55 software, which can be accessed on the National Soil Conservation Service website: http://www.nrcs.usda.gov/hydro/hydro-tools-models/tr55.html

<table>
<thead>
<tr>
<th>DESCRIPTION OF AREA</th>
<th>RUNOFF COEFFICIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>Downtown: 0.70 - 0.95</td>
</tr>
<tr>
<td></td>
<td>Neighborhood: 0.50 - 0.70</td>
</tr>
<tr>
<td>Residential</td>
<td>Single Family: 0.30 - 0.50</td>
</tr>
<tr>
<td></td>
<td>Multi-units, detached: 0.40 - 0.60</td>
</tr>
<tr>
<td></td>
<td>Residential (Suburban): 0.25 - 0.40</td>
</tr>
<tr>
<td></td>
<td>Apartment: 0.50 - 0.70</td>
</tr>
<tr>
<td>Industrial</td>
<td>Light: 0.50 - 0.80</td>
</tr>
<tr>
<td></td>
<td>Heavy: 0.60 - 0.90</td>
</tr>
<tr>
<td>Park, Cemeteries</td>
<td>0.30 - 0.35</td>
</tr>
<tr>
<td>Unimproved</td>
<td>0.30 - 0.30</td>
</tr>
</tbody>
</table>

**Table 4-1: Average Runoff Coefficients Based on Area Type**

*Source: American Society of Civil Engineers, 1969*

<table>
<thead>
<tr>
<th>CHARACTER OF SURFACE</th>
<th>RUNOFF COEFFICIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavement</td>
<td>Asphalt or concrete: 0.70 - 0.95</td>
</tr>
<tr>
<td></td>
<td>Brick: 0.70 - 0.85</td>
</tr>
<tr>
<td></td>
<td>Rocks: 0.70 - 0.95</td>
</tr>
<tr>
<td>Lawns, Sandy Soil</td>
<td>Flat, 2% grade: 0.05 - 0.10</td>
</tr>
<tr>
<td></td>
<td>Average, 2 - 7% grade: 0.10 - 0.15</td>
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<tr>
<td></td>
<td>Steep, 7% grade or more: 0.15 - 0.20</td>
</tr>
<tr>
<td>Lawns, Heavy Soil</td>
<td>Flat, 2% grade: 0.13 - 0.17</td>
</tr>
<tr>
<td></td>
<td>Average, 2 - 7% grade: 0.18 - 0.22</td>
</tr>
<tr>
<td></td>
<td>Steep, 7% grade or more: 0.25 - 0.35</td>
</tr>
</tbody>
</table>

**Table 4-2: Average Runoff Coefficients Based on Surface Type**

*Source: American Society of Civil Engineers, 1969*
Contents of a Storm Water Pollution Prevention Plan (SWPPP)

The SWPPP contains the specific practices the operator will apply to the site in order to satisfy the permit requirements. Required information includes a description of the site and the activity conducted on the site as well as a description of the Best Management Practices (BMP) that the operator will use to reduce pollutants in storm water discharges. Examples of the controls that must be addressed in the SWPPP include descriptions of the temporary and permanent stabilization practices that will be used (e.g., seeding of vegetation, geotextiles, vegetative buffer strips, and preservation of trees) and structures that divert flows of storm water or treat storm water on-site (e.g., silt fences, inlet protection, sediment traps, and sediment basins).

The SWPPP also requires inspection and maintenance procedures. Inspections must be conducted according to the schedule established in the permit. Typically, inspections must be conducted every 7 to 14 days and/or after a storm event of 0.5 inches or greater. Most permits require inspections to be performed by a person qualified to assess the conditions at the construction site and evaluate the effectiveness of the sediment and erosion control measures employed on the site. However, some permits require the inspector to be a Professional Engineer (PE), other professional, or an individual who has completed training or certification in a state-operated training program.

The inspection consists of a visual inspection of disturbed areas on the site, storage areas, sediment and erosion control measures, and vehicle entrances and exits to the site. The qualified person must prepare a report after each inspection, and maintain the inspection reports with the SWPPP. Another requirement of the SWPPP is the maintenance of the erosion and sediment controls implemented on the site. Most permits require that maintenance on malfunctioning controls must be performed as soon as practicable, and before the next storm event whenever possible. Some permits may contain more specific directives, such as EPA’s Construction General Permit, which requires sediment to be removed from sediment traps and basins when 50% of the design capacity has been filled.

Introduction to Best Management Practices (BMPs)

Best Management Practices (BMPs) are structural devices or nonstructural practices that are installed prior to or during the construction phase of a project to prevent pollutants from entering surface or ground water or to direct the flow of water. A BMP designed to reduce pollutant levels may be a facility that reduces the amount of pollutants initially entering the runoff, or a method that reduces the amount of pollutants within the runoff before it reaches the receiving waterbody.

A variety of BMPs can be used to mitigate some of the adverse impacts caused by development or redevelopment. As referenced in Chapter IV, local conditions will determine which practices are most appropriate for any given situation. Because practices used to control sediment and erosion during construction, when the soil is disturbed, are different from management practices used for long-term control of runoff after construction activities are complete, care must be taken to design BMPs which are appropriate for the development site. When designing storm water management facilities, the following considerations should be taken into account:

- Not all urban BMPs can reliably provide high levels of removal for both particulate and soluble pollutants.
- The longevity of some BMPs is limited to such a degree that their widespread use is not encouraged.

- BMP options are adaptable to most regions of the country with the exception of extremely arid regions of the West and the colder climates of the North. In these regions, conventional BMP designs need to be refined to account for high evaporation rates or subfreezing snowmelt conditions, respectively.
- No single BMP option can be applied to all development situations and all BMP options require careful site assessment prior to design.
- Several BMPs can have significant secondary environmental impacts, although the extent and nature of these impacts is uncertain and site specific.
- Relatively limited cost data exists to aid in the assessment of the comparative cost-effectiveness of urban BMP options. (Source: Schueler, et al., 1992)

Types of Best Management Practices

BMPs are typically classified by the operating principal or physical mechanism used to reduce pollution. The five general categories are outlined below. Any given BMP may fit into one or more category(s). Data sheets describing specific BMPs are provided in Appendix A.

- Vegetative Stabilization. Vegetative stabilization measures are nonstructural practices designed to ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized with herbaceous ground cover. Vegetative stabilization measures highlighted in Appendix A include seeding, sodding, geotextiles, mulching, preservation of mature vegetation and vegetative buffer strips.
- Structural Controls. Structural controls are practices designed to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Examples include siltation fences, straw bale dikes, earth dikes/diversions, sediment traps, check dams, subsurface drains, pipe slope drains, outlet protection, rock inlet protection, reinforced soil retaining systems, sediment basins, temporary rock construction entrances, vegetated storm water conveyance channels and temporary stream crossings.
- Storm Water Management. Storm water management facilities are installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Storm water management practices include detention ponds, retention ponds, vegetated swales, infiltration basins, velocity dissipation devices, wetland treatment and sequential systems.

- Two Types of Storm Water Management Systems. The two distinct types of systems used to carry and store storm water runoff are closed systems and open systems.
  - Closed Systems: Closed systems are underground conduits and other structures that carry runoff to a designated discharge point or remove sediment and pollution from the storm water before it is discharged. These systems include pipes, catch basins, inlets, and underground retention and detention areas. Pipes are the most common type of closed system and must be used in situations where open swales are not suited for conveying storm water. Examples of these situations include areas where the rate of runoff is too swift to run over ground, where topography is too steep, or where open systems are considered unsightly or dangerous.
  - Open Systems: Open systems are conduits and management facilities that carry and treat storm water runoff above the ground. These systems include grassed swales, channels, wetlands, and retention and detention ponds. If open systems are used as final destinations, developers may be required to design the facilities so that the system is able to retain as much as 100% of the runoff on the property.

- Good Housekeeping. Good housekeeping practices include a broad array of procedures aimed at keeping a clean construction site and minimizing the potential for spills and other incidents that may adversely affect water quality. Practices highlighted include catch basin cleaning, fertilizer
management, vehicle wash-down stations, construction waste and litter control, equipment maintenance and material storage.

**Proper Site Planning.** Proper site planning encourages the avoidance of critical areas and the use of existing natural drainage features to optimize storm water control and to minimize soil disturbance. Site planning measures referenced include the use of natural features, landscaping, street design, setbacks and cluster development.

### Points to Consider When Selecting BMPs

It is usually necessary to use a combination of systems and practices to control construction site runoff during construction, as well as storm water discharges that occur after construction is complete. In some instances, the same BMP, such as a vegetated swale or sediment basin, can be effective in both erosion and sediment control and storm water management although interim maintenance may be required. When choosing the most effective BMPs for a given site, the following points should be considered:

**Physical Site Suitability**

BMPs should only be used in areas where the physical site conditions are suitable. Physical factors that should be taken into account include soil type, watershed area, depth to water table, depth to bedrock, site size and area of disturbance, and topography. Some site limitations may be overcome with special design features.

Figures 4-1 and 4-2 can be used to evaluate which BMP options are physically feasible for a given site. These comparisons help the designer to shorten the list of BMP options that need to be considered at the site.

### Figure 4-2: Evaluation of BMP Feasibility Per Site Size and Soil Type

<table>
<thead>
<tr>
<th>BMP</th>
<th>Slope</th>
<th>High Water Table</th>
<th>Close to Bedrock</th>
<th>Precipitation to Groundwater</th>
<th>Space Consumption</th>
<th>Maximum Depth</th>
<th>Restricted Land Uses</th>
<th>High Sediment Input</th>
<th>Thermal Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet Pond</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infiltration Trench</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infiltration Basin</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focused Flow</td>
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<td></td>
<td></td>
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<tr>
<td>Filter Strips</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Figure 4-3: Evaluation of BMP Feasibility Per Selected Site Features

Figure 4-3 presents a matrix that shows whether a BMP is also subject to other physical restrictions. In these cases, a solid dot indicates that the factor is not normally a restriction, whereas an open dot suggests that it is a restriction. In most cases, these restrictions do not necessarily prevent the use of a BMP option, but may affect where a BMP is located on a site, or how it is designed. As a general rule, pond BMPs normally face fewer of these site restrictions than infiltration BMPs.

**Effectiveness in Reducing Peak Discharges**

The peak discharge rate is important because of the flooding and increased erosion that can occur if the discharge rate is not properly controlled. The degree of reduction achieved depends on the design and location of the structure. The consideration of storm water storage and conveyance is especially important in the design of post-construction management measures.
Figure 4.4 shows the extent to which common BMP designs provide for peak discharge control, volume control, groundwater recharge and stream bank erosion control. A solid dot indicates that the BMP normally provides the benefit; an open dot indicates that it does not; and a half dot suggests that the benefit might be provided in certain sites or with special design modification. As can be seen, very few BMP options can achieve the full spectrum of desirable storm water benefits.

### Table 4.3: Summary of Pollutant Removal Efficiency Percentages and Ranges

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Biofilter-Grass Strip</th>
<th>Biofilter-Grass Swale</th>
<th>Detention Basin (dry)</th>
<th>Filter</th>
<th>Hydrodynamic Devices</th>
<th>Oil and Water Separator</th>
<th>Retention Basin (wet)</th>
<th>Total Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSS</td>
<td>20.0 (64.9-94.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>TP</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>OP</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>TN</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>N-NH₄⁺</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>N-O₃⁻</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>O &amp; G</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
</tbody>
</table>

*Not enough data to perform analysis

### Table 4.4: Summary of Pollutant Removal Efficiency Percentages and Ranges by Pollutant of Concern and BMP Type

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Biofilter-Grass Strip</th>
<th>Biofilter-Grass Swale</th>
<th>Detention Basin (dry)</th>
<th>Filter</th>
<th>Hydrodynamic Devices</th>
<th>Oil and Water Separator</th>
<th>Retention Basin (wet)</th>
<th>Total Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSS</td>
<td>20.0 (64.9-94.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>OP</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
<tr>
<td>TN</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
<td>28.0 (181.9-99.0)</td>
<td>90.0 (1.0-17.0)</td>
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</tr>
<tr>
<td>N-NH₄⁺</td>
<td>20.0 (181.9-99.0)</td>
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<td>81.0 (61.0-84.8)</td>
<td>60.0 (61.0-84.8)</td>
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<td>74.0</td>
</tr>
<tr>
<td>O &amp; G</td>
<td>20.0 (181.9-99.0)</td>
<td>60.0 (56.0-99.6)</td>
<td>61.5 (1.0-84.8)</td>
<td>81.0 (61.0-84.8)</td>
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<td>90.0 (1.0-17.0)</td>
<td>74.0</td>
</tr>
</tbody>
</table>

*Not enough data to perform analysis

### Figure 4.4: Evaluation of BMP Usefulness to Control Selected Peak Discharges, Volume and Groundwater Recharge

- **Effectiveness in Improving Water Quality**
  - It is important to have an experienced engineer, working in concert with the "land development team"—developer/builder and staff, land planner, landscape architect, financial planner—to design how structural and nonstructural controls will be used to protect the water quality of receiving waterbodies. It is also important for the "land development team" to recognize that the "often quoted" pollutant removal efficiencies for commonly used BMPs as being 80-90% is simply not based upon real monitoring data, as a study by NAHB demonstrates.

  In response to actions by EPA, NAHB initiated a study in 2002 to answer the basic question: "What BMPs are most effective in removing pollutants most commonly associated with stormwater runoff from active construction sites and post-construction sites?" As it turned out, there were very limited data on active construction sites, but there were data on the efficiencies of BMPs designed to remove pollutants (total suspended solids, nitrogen, phosphorus, and oil & grease) in stormwater runoff from post-construction sites. From NAHB's study (NAHB, 2002) the take home message, as the figures and table below illustrate, is that:
  1. No one BMP clearly out performs any other;
  2. Every BMP has a wide range of efficiencies;
  3. Neither watershed characteristics nor BMP design could be identified as key factors in performance efficiency; and
  4. Existing published data are regionally biased in favor of the eastern U.S., and published data are lacking for large areas of the country.

One other message from Table 4.3 is that there are more data regarding the performance of BMPs to remove Total Suspended Solids (TSS) and Total Phosphorus (TP) than the other pollutants associated with stormwater runoff. This makes sense because these are typically the pollutants of greatest concern from runoff under development, existing developments, and from agricultural and forestry practices. Figures 4-5 and 4-6, which show TSS and TP removal efficiencies for specific BMPs, clearly support the take-home message from NAHB's study listed above. In other words, no single BMP emerges as the best available technology and each BMP has a wide range of efficiencies.

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*Source: NAHB, 2002*

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*Source: NAHB, 2002*
As the summary table and figures above show, it is very important to design BMPs with specific pollutants in mind. For example, a “Biofilter-Grass Strip” could be very effective in removing TSS, but is not effective in removing TP. In fact, “Biofilter-Grass Strip” BMPs could actually add Total Phosphorus. So, it is not appropriate to assume that if a BMP efficiently removes TSS that it will also effectively remove other pollutants. If specific pollutants are not considered when BMPs are designed, water quality could be degraded by a BMP rather than protected.

The figure below shows the distribution of study sites from which stormwater BMP monitoring data are available and illustrates the lack of information from large areas of the US.

From the table and figures above, it is apparent that stormwater and erosion and sediment control BMPs must be carefully designed by a competent engineer who is able to provide local BMP performance data from similar BMPs from other similar projects in your area.

**Figure 4-6: TP Percent Removal Efficiency Comparisons by BMP Type** (Source: NAHB, 2002)

**Figure 4-7: Map Showing Locations of BMP Study Sites** (Source: NAHB, 2002)

While the data from NAHB's study show that the state-of-the-art of BMP design is still an emerging science, it is worth noting that even though the percent removal efficiencies for each type of BMP varies widely and data are limited, NAHB’s study revealed that the water quality of the discharge from the BMPs included in the study was actually quite good. Table 4-4 shows the median of TSS from stormwater discharges from all BMPs, for which sufficient data were available, to have a range of 11 to 21 mg/L. This low level of TSS should not adversely impact most aquatic organisms or habitats (NAHB, 2000).

**Table 4-4: Concentration of Selected Pollutants in Storm Water From Commonly Used BMPs** (Source: NAHB, 2002)

**+ Cost Effectiveness**

An economic analysis can assist in identifying the combination of BMPs that will achieve water quality goals at the lowest costs. When comparing alternatives, all costs for the design life of a BMP must be considered, including initial costs of land, engineering, materials and construction, and maintenance costs. Post construction benefits other than water quality and flood prevention, such as increases in land value for properties adjacent to attractive retention ponds, recreational benefits or wildlife benefits, should also be considered. For cost information on specific BMPs, refer to Appendix A.

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- **Maintenance Requirements**

  The initial design of BMPs must take maintenance requirements into account. A feature such as a forebay in a detention pond may increase annual maintenance costs slightly, but the interval between costly sediment cleanouts in the whole pond may be extended significantly. Maintenance planning should be completed at the time of design. Such a plan should identify how often inspections are to occur, who is to perform the inspections, and who will pay for any needed maintenance.

- **Effect on Other Resources**

  When selecting a BMP, care should be taken to assess its impact on other resources such as groundwater, fish and wildlife and their habitat, and shorelines and channels. Downstream impacts must also be investigated, particularly during construction.

  Figure 4-8 is a screening tool that shows the environmental and human amenities that can be provided by a particular BMP. In most cases, these amendments are not automatically provided when a BMP is built. Rather, they are a result of thoughtful design, regular maintenance, and a strong commitment to a creative landscape planting. In this matrix, a solid dot indicates that there is a strong potential for a creative landscape planting. The figure also does not indicate a negative or no potential; a quarter filled in indicates that a BMP may provide the amenity with some design modifications or as a result of unusual site conditions.

- **Public Acceptance**

  Aesthetics are an important consideration in the design of BMPs because most of them are constructed in urban environments. In many cases, if properly designed, post construction BMPs can be a visual asset to the surrounding area. Other considerations important to those who live near structural BMPs include odor, weeds, turbidity and trash.

- **Potential for Multiple Use**

  Where practicable, post construction BMPs, particularly those that require substantial amounts of land, should be designed to accommodate several uses. Examples of secondary uses include open space, wildlife habitat and recreational amenities. In some instances, a sediment basin that is used during the construction phase of a project can be cleaned out, stabilized, and used as a detention pond for managing post construction storm water.

- **Liability**

  A number of BMPs carry the potential to create a liability for the developer. Further, if BMPs are not properly maintained, such liabilities can escalate.

### Detailed Specifications of Management Measures

Figure 4-9 provides a comparative assessment of the effectiveness of many of the urban BMPs presented in Appendix A. For details on the cost-effectiveness and design features of storm water management measures, refer to Appendix A: Best Management Practices.

### URBAN BMP OPTIONS* RELIABILITY FOR POLLUTANT REMOVAL LONGLIevity* APPLICABLE TO MOST MANAGEMENT WILDLIFE HABITAT ENVIRONMENTAL CONCERNS COMPARATIVE COST SPECIAL CONSIDERATIONS

| SCOURWATER MEANDERS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| DRAINAGE DAMS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| SEEPAGE FLOWS Moderately high. Moderate to high. 10+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| INTEGRATED TREATMENT Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| PONDS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| SWALE SYSTEMS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| RETENTION BASINS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| TRICKLE TRENCHES Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| INFILTRATION BASINS Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |
| FILTER STRIPS Infiltration Moderate to high. Moderate to high. 20+ years Moderate to high. Applicable to most microhabitats. High. Stormwater, streamflow, sediment, erosion, evapotranspiration. Magnetically high. Requires a water source. Requires a vegetation source. |

### Figure 4-8: Evaluation of BMP Usefulness to Provide Environmental and Human Amenities

(Source: Schueler, 1987)

### Figure 4-9: Comparative Assessment of the Effectiveness of Current Urban Best Management Practices

(Source: Schueler, 1987)
Special Requirements

EPA and a number of states have specific permit requirements for endangered species protection and storm water discharges that enter an impaired waterbody, as defined by state 303(g) lists. EPA requires documentation related to these requirements to be included in the SWPPP.

Total Maximum Daily Load (TMDL)

The Construction General Permit requires documentation verifying that the permit is eligible in light of impaired waters and potential TMDL requirements. The operator must determine if storm water discharges from the construction site will be received by a waterbody listed on the pertinent impaired water list and/or if a TMDL has been approved for the receiving waterbody and has specific wastewater allocation requirements for storm water discharges, the applicator must consult the state TMDL agency or EPA. The Construction General Permit requires a summary of the consultation with the TMDL authority and the measures taken to assure that any limits on pollutant discharge contained in the TMDL are met.

EPA makes the assumption that where a TMDL addresses a pollutant that may be found in storm water discharges, but does not include a specific allocation for storm water discharges, compliance with a SWPPP satisfies the requirements of the TMDL. Additionally, where a TMDL specifies a general wastewater allocation for construction storm water discharges, but does not contain specific requirements for individual construction sites, EPA again assumes that compliance with a SWPPP constitutes compliance with the TMDL.

Endangered Species

To ensure that storm water discharges and discharge-related activities do not jeopardize any species currently listed as threatened or endangered under the Endangered Species Act and/or destroy or adversely modify federally-designated critical habitat, the following must be done in states where EPA is the permitting authority.

To be eligible for coverage under the Construction General Permit, you must follow a four-step process to assess the possible impacts that your activities may have on species currently listed as threatened or endangered under the Endangered Species Act (ESA) and/or federally-designated critical habitat. These steps include determining if listed species are present or near your project area, determining whether your project is likely to adversely affect any listed species or designated critical habitat, and determining if there are measures that can be used to avoid adverse impacts to those species or habitats, and finally, determining if the activity can otherwise meet permit eligibility requirements. To be eligible for coverage under the Construction General Permit, you must meet at least one of the following six criteria:

A. No currently listed threatened or endangered species, or their designated critical habitat, lie in the project area.

B. Formal consultation with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) under Section 7 of the ESA determined that discharges would (a) not jeopardize listed species or adversely modify or destroy critical habitat, or (b) would be unlikely to adversely impact listed species or critical habitat;

C. Informal consultation with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) under Section 7 of the ESA determined that discharges (a) would not jeopardize listed species or adversely modify or destroy critical habitat, or (b) would be unlikely to adversely impact listed species or critical habitat;

D. Construction and discharge activities are already authorized under an approved Habitat Conservation Plan (HCP) and an incidental take permit issued under Section 10 of the ESA;

E. Discharges are not likely to adversely affect listed species or critical habitat; or

F. Discharges were already addressed in the approval of another operation or permit of eligibility for the project site, and included your construction activities. If you certify eligibility under this particular criterion, you must be sure to abide by all conditions identified by the other operator in their certification to retain permit coverage.

When completing a Notice of Intent (NOI), you must specify which criteria satisfied eligibility for permit coverage (criteria A-F above). When completing a SWPPP, you must document the process you used to determine permit eligibility, plus you are required to:

1. Confirm delivery of the NOI to EPA, either electronically through EPK’s electronic NOI system or through registered, express, or overnight mail;

2. Include any correspondence that you’ve had with FWS or NMFS throughout the project planning process, including any notification that delays your authorization to discharge under this permit; and

3. Describe any measures that are needed to protect listed species or critical habitat during the entire project.

Refer to Appendix D for the Construction General Permit’s specific requirements on how to prepare this documentation for the SWPPP.

Site Construction and SWPPP Implementation

Once the SWPPP is complete, the Notice of Intent (NOI) filed, and any waiting periods satisfied or authorizations received, construction may begin. All specifications and controls indicated on the SWPPP, must be followed according to and in accordance with the sequence indicated in the SWPPP or there is a potential to be in violation with the Construction General Permit. Records of the construction activity must be maintained, including dates when major grading activities occur, when activities cease, and when areas are restabilized.

The following actions must be performed to ensure compliance with the Construction General Permit.

Inspections & Maintenance. Inspection and maintenance of vegetation and the erosion and sediment control measures must be performed on a regular basis. For example, EPK’s Construction General Permit requires the discharger to provide personnel to inspect the construction site at least once every seven days OR at least once every 14 days and within 24 hours of a storm event which is 0.5 inches or greater. An inspector must also look for evidence of pollutants entering the drainage system in disturbed and materials storage areas, and locations where vehicles enter and exit the site, as well as the operational functionality of erosion and sediment control devices.
Keeping Reports. A report summarizing the scope of the investigation, names and qualifications of inspecting personnel, dates, major observations and corrective actions taken to address any deficiencies shall be made and retained as part of the SWPPP.

Altering the SWPPP. In order for a construction activity to be in full compliance with an NPDES storm water permit, and in order for the SWPPP to be most effective, the SWPPP should be consistent with permit conditions, and the SWPPP should accurately reflect site features and operations. If either of these conditions is not met, the SWPPP should be revised. Changes that may require plan alteration include changes in design, construction, operation or maintenance that will have a significant effect on discharges of pollution from storm water coming from the site.

Final Stabilization and Termination

As soon as practicable after construction activities have been completed, all disturbed areas should be permanently stabilized to prevent further erosion. Final stabilization typically includes permanent seeding or sodding, or the installation of other vegetation or landscaping techniques.

Many NPDES permits for the discharge of storm water from construction sites are in effect until the discharge is eliminated, which typically occurs when final stabilization has been completed. When the storm water discharge ceases, coverage is no longer needed. EPA's Construction General Permit allows the owner or operator of a construction site to cease coverage by submitting a Notice of Termination (NOT). The NOT informs the permit enforcement agency that the construction activity has ceased and the area is stabilized. The NOT is typically the final task required to comply with the requirements of an NPDES permit.

Long-Term Operation & Maintenance

At the time the NOT is submitted, all long-term, post construction storm water management controls should have been cleaned out (i.e., final time). Operation and maintenance requirements should then be forwarded to the owner of the facility(s) (i.e., homeowner(s), neighborhood association, management company, county or municipality) to ensure proper functioning of the facility in the future.

Although the NPDES Construction General Permit does not address the ultimate operation and maintenance of post construction storm water management structures, a number of state and/or local laws may include long-term management specifications. Such laws may include state programs promulgated pursuant to the Federal Costal Zone Reauthorization Amendments (CZARA), state or local erosion and sediment control or storm water control laws, or municipal requirements imposed on discharges into separate storm sewer systems.

Storm Water Pollution Prevention Plan & Required Components

The preparation and implementation of the Storm Water Pollution Prevention Plan (SWPPP) is the most important component of the permittee’s obligations under the Construction General Permit. It is critical that each requirement of the permit is addressed in the SWPPP. This section provides a list of state-specific guidelines that are contained in Appendix C, a CD-ROM included with this Guide. Additionally, this section provides specific examples to aid in the preparation and implementation of the SWPPP, as well as completing the inspection report, which is also a part of the SWPPP. These sample documents correspond with the requirements contained in EPA's Construction General Permit, and while many states programs also have these requirements, many variations exist as well.
Sample Storm Water Pollution Prevention Plan Checklist

Construction Storm Water Pollution Prevention Plan Checklist Based On EPA's Construction General Permit Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator(s) in control of site specifications must obtain permit coverage</td>
<td>CWA 301</td>
</tr>
<tr>
<td>Operator(s) in control of day-to-day activities must obtain permit coverage</td>
<td>CWA 301</td>
</tr>
<tr>
<td>Prepare SWPPP before construction begins</td>
<td>CGP 3.1.A</td>
</tr>
</tbody>
</table>

**SWPPP CONTENTS: SITE AND ACTIVITY DESCRIPTION**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWPPP must identify all potential sources of pollution include: porto-pottys, fuel tanks, staging areas, waste containers, chemical storage areas, concrete cure, paints, solvents, etc...</td>
<td>CGP 3.1.B</td>
</tr>
<tr>
<td>SWPPP must identify all operators for the project site and the areas of the site over which each operator has control</td>
<td>CGP 3.3.A</td>
</tr>
<tr>
<td>SWPPP must contain a site description containing the following requirements:</td>
<td>CGP 3.3.B.1</td>
</tr>
<tr>
<td>Nature of activity in description</td>
<td>CGP 3.3.B.2</td>
</tr>
<tr>
<td>Intended sequence of major activities</td>
<td>CGP 3.3.B.3</td>
</tr>
<tr>
<td>Total disturbed acreage</td>
<td>CGP 3.3.B.4</td>
</tr>
<tr>
<td>General location map</td>
<td>CGP 3.3.C.1-8</td>
</tr>
<tr>
<td>Site map must show drainage patterns, slopes, areas of disturbance, locations of major controls, structural practices shown, stabilization practices, offsite materials, waste, borrow or equipment storage areas, surface waters, discharge points, areas of final stabilization</td>
<td>CGP 3.3.D</td>
</tr>
<tr>
<td>Location/description industrial activities, like concrete or asphalt batch plants</td>
<td>CGP 3.3.D</td>
</tr>
</tbody>
</table>

**SWPPP CONTENTS: CONTROLS TO REDUCE POLLUTANTS**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe all pollution control measures (e.g. BMPs)</td>
<td>CGP 3.4.A</td>
</tr>
<tr>
<td>Describe sequence for implementation</td>
<td>CGP 3.4.A</td>
</tr>
<tr>
<td>Detail operator(s) responsible for implementation</td>
<td>CGP 3.4.A</td>
</tr>
<tr>
<td>SWPPP must describe interim stabilization practices</td>
<td>CGP 3.4.B</td>
</tr>
<tr>
<td>SWPPP must describe permanent stabilization practices</td>
<td>CGP 3.4.B</td>
</tr>
<tr>
<td>SWPPP must describe a schedule to implement stabilization practices</td>
<td>CGP 3.4.C.1-3</td>
</tr>
<tr>
<td>The following dates must be recorded:</td>
<td></td>
</tr>
<tr>
<td>Major grading activities</td>
<td></td>
</tr>
<tr>
<td>Construction temporarily or permanently ceased</td>
<td></td>
</tr>
<tr>
<td>Stabilization measures initiated</td>
<td></td>
</tr>
<tr>
<td>SWPPP must have a description of structural practices to divert flows from exposed soils, certain flows, or limit runoff from exposed areas</td>
<td>CGP 3.4.D</td>
</tr>
<tr>
<td>SWPPP must have a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed</td>
<td>CGP 3.4.E</td>
</tr>
<tr>
<td>SWPPP must describe measures to prevent discharge of solid materials to waters of the US, except as authorized by CWA Section 403 permit</td>
<td>CGP 3.4.F</td>
</tr>
<tr>
<td>SWPPP must describe measures to minimize off-site vehicle tracking and generation of dust</td>
<td>CGP 3.4.G</td>
</tr>
<tr>
<td>SWPPP must include description of construction or waste materials expected to be stored on site with updates regarding controls used to reduce pollutants from these materials</td>
<td>CGP 3.4.H</td>
</tr>
</tbody>
</table>

* CWA = Clean Water Act and CGP = EPA's Construction General Permit

**INSPECTIONS**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspections must be performed either once every 7 days, or once every 14 days and within 24 hours after storm event greater than 0.5 inches (not required if temporary stabilization; runoff unlikely due to winter conditions; construction during arid periods in arid areas)</td>
<td>CGP 3.10.A, 3.10.B</td>
</tr>
<tr>
<td>Inspections must be conducted by qualified personnel</td>
<td>CGP 3.10.B</td>
</tr>
<tr>
<td>All areas disturbed by construction activity or used for storage of materials which were exposed to precipitation must be inspected</td>
<td>CGP 3.10.E</td>
</tr>
<tr>
<td>All pollution control measures must be inspected to ensure proper operation</td>
<td>CGP 3.10.E</td>
</tr>
<tr>
<td>Discharge locations must be observed and inspected</td>
<td>CGP 3.10.E</td>
</tr>
<tr>
<td>For discharge locations that are not accessible, nearby locations must be inspected</td>
<td>CGP 3.10.E</td>
</tr>
<tr>
<td>Entrance/exit must be inspected for off-site tracking</td>
<td>CGP 3.10.E</td>
</tr>
<tr>
<td>Site inspection report must include: date, name and qualifications of inspector, weather information, location of sediment/pollutant discharge, BMP(s) required maintenance, BMP(s) that have failed, BMP(s) that are needed, corrective action required including changes/updates to SWPPP and schedule/dates</td>
<td>CGP 3.10.G</td>
</tr>
<tr>
<td>Inspection reports must be properly signed/certified</td>
<td>CGP 3.10.G</td>
</tr>
<tr>
<td>Sign/notice must be posted</td>
<td>CGP 3.12.B</td>
</tr>
<tr>
<td>Sign must contain copy of complete NOI</td>
<td>CGP 3.12.B</td>
</tr>
<tr>
<td>Sign must state location of SWPPP or contact person for scheduling viewing times where on-site location for SWPPP unavailable must be noted on sign</td>
<td>CGP 3.12.B</td>
</tr>
<tr>
<td>Velocity dissipation devices must be located at discharge locations or outfall channels to ensure non-erosive flow to receiving water</td>
<td>CGP 3.13.E</td>
</tr>
<tr>
<td>Control measures must be properly selected, installed &amp; maintained</td>
<td>CGP 3.13.A</td>
</tr>
</tbody>
</table>

**MAINTENANCE**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance must be performed prior to next anticipated storm event</td>
<td>CGP 3.6.B</td>
</tr>
<tr>
<td>When sediment escapes the site, it must be removed at a frequency necessary to minimize off-site impacts</td>
<td>CGP 3.13.B</td>
</tr>
</tbody>
</table>

National Association of Home Builders © 2006
Litter, construction debris, and construction chemicals exposed to storm water are not prevented from becoming a pollutant source (e.g. screening outfalls, pickup daily, etc.)

CGP 3.13.C

Stabilization measures must be initiated as soon as practicable on portions of the site where construction activities have temporarily or permanently ceased within 14 days after such cessation

CGP 3.13.D

*Exceptions:

(a) Snow or frozen ground conditions

CGP 3.13.D.1

(b) Activities will be resumed within 14 days

CGP 3.13.D.2

(c) Arid or Semi-arid areas (<20 inches per year)

CGP 3.13.D.3

Common Drainage of 10+ acres must have a sedimentation basin

CGP 3.13.E.1

Where sedimentation basin not attainable, smaller sediment basins, sediment traps, or erosion controls must be implemented for down slope boundaries

CGP 3.13.E.2

Sediment must be removed from sediment basin or traps when design capacity reduced by 50% or more

CGP 3.6.C

Common Drainage less than 10 acres does not have sediment traps, silt fences, vegetative buffer strips, or equivalent sediment

CGP 3.13.E.3

Sediment must be removed from sediment trap when design capacity reduced by 50% or more

CGP 3.6.C

---

**Sample Storm Water Pollution Prevention Inspection Report Form**

Inspections must occur:

- At least once every seven days, or
- Every 14 days and within 24 hours of the end of a storm event that is 0.50 inches or greater

### Project Name: __________________________ Date of Inspection: __________________________

#### General Observations of All Disturbed Areas (check one):

- No erosion or sedimentation problems
- Erosion or sedimentation problems are developing, but no additional control measures needed at this time
- Erosion or sedimentation problems are evident and additional control measures needed as soon as practicable

#### General Observations of Storage Areas (Materials) Exposed to Precipitation (check one):

- No pollution problems evident
- Potential pollution problem evident; preventative action needed
- Evidence of pollution problem seen; clean up needed immediately

#### Off-Site Pollution (check one):

- No sediment tracking evident
- Sediment tracking evident
- Discharge: how many?
- No significant impacts to receiving waterbody
- Significant impacts to receiving waterbody

#### Weather Information Since Last Inspection

<table>
<thead>
<tr>
<th>Rain Events (Dates)</th>
<th>Beginning Time</th>
<th>Ending Time</th>
<th>Amount (inches)</th>
<th>Discharge?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Weather Information During Inspection

Precipitation? Yes No If yes, what type? (rain, snow, etc.)

Any storm water discharge? Yes No If yes, state location: ________

#### Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Type of Control</th>
<th>Date Installed or Modified</th>
<th>Current Condition</th>
<th>Corrective Action/Maintenance Needed/Other Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Control Type Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Silt Fence</td>
<td>11</td>
<td>Vegetative Buffer Strip</td>
</tr>
<tr>
<td>2</td>
<td>Earth Dikes</td>
<td>12</td>
<td>Vegetative Preservation Area</td>
</tr>
<tr>
<td>3</td>
<td>Structural Diversion</td>
<td>13</td>
<td>Construction Entrance</td>
</tr>
<tr>
<td>4</td>
<td>Swale</td>
<td>14</td>
<td>Perimeter Ditch</td>
</tr>
<tr>
<td>5</td>
<td>Sediment Trap</td>
<td>15</td>
<td>Curb &amp; Gutter</td>
</tr>
<tr>
<td>6</td>
<td>Check Dam</td>
<td>16</td>
<td>Paved Road Surface</td>
</tr>
<tr>
<td>7</td>
<td>Subsurface Drain</td>
<td>17</td>
<td>Rock Outlet Protection</td>
</tr>
<tr>
<td>8</td>
<td>Pipe Slope Drain</td>
<td>18</td>
<td>Reinforced Soil Retaining</td>
</tr>
<tr>
<td>9</td>
<td>Leevi Spreader</td>
<td>19</td>
<td>Gabion</td>
</tr>
<tr>
<td>10</td>
<td>Storm Drain Inlet Protection</td>
<td>20</td>
<td>Sediment Basin</td>
</tr>
</tbody>
</table>

Condition Codes

| C = Good | C = Needs to Be Cleared | M = Marginal, needs maintenance or replacement soon | P = Poor, needs immediate maintenance or replacement | O = Other |

Are changes to the SWPPP needed?  □ Yes  □ No
If yes, describe:

Deadline for change (must be within 7 calendar days of inspection):

Are changes to the site map needed?  □ Yes  □ No
If yes, describe:

Deadline for change (must be within 7 calendar days of inspection):

Name ___________________________ Date ____________

Qualification

The above signature also shall certify that this facility is in compliance with the Storm Water Pollution Prevention Plan and the Construction General Permit for Storm Water Discharges from Large & Small Construction Activities if there are not any incidents of noncompliance identified above.

******

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name (Responsible Authority) ___________________________ Date ____________

Sample Storm Water Pollution Prevention Plans and Site Maps

Sample 1: Homerville Apartments  Source: USEPA, 1992

**SITE DESCRIPTION**

<table>
<thead>
<tr>
<th>Project Name &amp; Location</th>
<th>Owner Name &amp; Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Latitude, Longitude or Address)</td>
<td>Quality Associates Center City, ANY STATE 00000</td>
</tr>
</tbody>
</table>

**Description (Purpose & Types of Soil Disturbing Activities):**

This project will consist of three low-rise, attached apartment buildings with adjacent parking facilities.

Soil disturbing activities will include: clearing and grubbing; installing a stabilized construction entrance, perimeter, and other erosion and sediment controls; grading excavation for the sedimentation pond, storm sewer, utilities, and building foundations; construction of curb and gutter, road, and parking areas; and preparation for final planting and seeding.

**Runoff Coefficient:**

The final coefficient of runoff for the site will be 0.5

**Site Area:**

The site is approximately 11.0 acres of which 9.8 acres will be disturbed by construction activities.

**Sequence of Major Activities:**

1. Install stabilized construction entrance
2. Clear and grub for earth dike and sediment basin
3. Install earth dike
4. Construct sedimentation basin
5. Continue clearing and grading
6. Pile topsoil
7. Stabilize denuded areas and stockpiles within 14 days of last construction activity in that area
8. Install utilities, storm sewers, curb and gutter
9. Apply stone to parking area and road
10. Construct apartment buildings
11. Complete grading and install permanent storm drainage and plantings
12. Complete final paving
13. Remove accumulated sediment from basin
14. When all construction activity is complete and the site is stabilized, remove earth dike and reseed any areas disturbed by their removal

**Name of Receiving Waters:**

The entire site will drain into Rocky Creek, which is approximately one hundred yards from the site.
### CONTROLS

#### Erosion and Sediment Controls

**Stabilization Practices**

Temporary Stabilization – Top soil stock piles and disturbed portions of the site where construction activity temporarily ceases for at least 21 days will be stabilized with temporary seed and mulch no later than 14 days from the last construction activity in that area. The temporary seed shall be Ryegrass (grain) applied at the rate of 120 pounds per acre. Prior to seeding, 2,000 pounds of ground agricultural limestone and 1,000 pounds of 10-10-10 fertilizer shall be applied to each acre to be stabilized. After seeding, each area shall be mulched with 4,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight. Areas of the site that are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until bituminous pavement can be applied.

Permanent Stabilization – Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 14 days after the last construction activity. The permanent seed mix shall consist of 80 pounds/acre tall fescue, and 40 pounds per acre kobe lesperdesa. Prior to seeding, 4,000 pounds of ground agricultural limestone and 2,000 pounds of 10-10-10 fertilizer shall be applied to each acre to be stabilized. After seeding, each area shall be mulched with 4,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight.

**Structural Practices**

Earth Dike – will be constructed along the uphill perimeter (north) of the site. A portion of the dike will divert water around the construction site. The remaining portion of the dike will collect runoff from the disturbed area and direct the runoff to the sediment basin.

Sediment Basin – will be constructed at the common drainage location on the south side of the construction site. The basin will be formed by constructing an embankment across an existing gully and excavating a storage pond with a volume of 35,000 cubic feet (0.62 acre-feet). The basin will drain through a corrugated metal riser and outlet pipe to a riprap outlet apron. Once construction activities are nearly complete, the accumulated sediment will be removed from the basin.

**Post-Construction Storm Water Management**

Storm water drainage will be provided by curb and gutter, storm sewer and catch basin, for the developed areas. The areas that are not developed will be graded at least 0.5% and have permanent seeding or plantings. Two acres of the site will remain untouched and in its natural state. When construction is complete the entire site will drain to a wet detention basin. The wet detention basin will be in the location of the temporary sediment basin. When upslope areas are stabilized, the accumulated sediment will be removed from the sediment basin, and the areas on the sides of the basin will be planted with vegetation. The wet detention pond is designed with a permanent pool volume of 0.62 acre-feet. This is equivalent to one inch of runoff for the entire drainage area. It is expected that this wet detention pond design will result in an 80% removal of total suspended solids from the site's storm water runoff. The pond has been designed by a professional engineer to keep peak flows from the two and ten year/24-hour storms at their pre-development rates. The outlet of the detention basin will be stabilized by a riprap apron.

### OTHER CONTROLS

**Waste Disposal:**

**Waste Materials:**

All waste materials will be collected and stored in a securely lidded metal dumpster rented from the ADF Waste Management Company, which is a licensed solid waste management company in Center City. The dumpster will meet all local Center City and any State solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week or more often if necessary, and the trash will be hauled to the Center City Dump. No construction waste materials will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the office trailer and Mr. Doe, the individual who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

**Hazardous Waste:**

All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be instructed in these practices and Mr. Doe, the individual who manages day-to-day site operations, will be responsible for seeing that these practices are followed.

**Sanitary Waste:**

All sanitary waste will be collected from the portable units a minimum of three times per week by the TIDEE Company, a licensed Center City sanitary waste management contractor, as required by local regulation.

**Offsite Vehicle Tracking:**

A stabilized construction entrance has been provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be swept daily to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

**Dust Control:**

In addition to using construction sequencing and minimizing the amount of land disturbed at any one time, sprinkling water/irrigation on high traffic areas will be used. Vegetative cover and mulch will also serve as dust control measures.

### TIMING OF CONTROLS/MESURES

As indicated in the Sequence of Major Activities, the earth dike, stabilized construction entrance and sediment basin will be constructed prior to clearing or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than 21 days will be stabilized with a temporary seed and mulch within 14 days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and mulch. After the entire site is stabilized, the accumulated sediment will be removed from the trap and the earth dike will be removed.

### CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, & LOCAL REGULATIONS

The Storm Water Pollution Prevention Plan reflects Center City requirements for storm water management and erosion and sediment control, as established in Center City ordnance 5-1888. To ensure compliance, this plan was prepared in accordance with the Center City Storm Water Management, Erosion and Sediment Control Handbook, published by the Center City Department of Planning, Storm Water Management Section. There are no other applicable State or Federal requirements for sediment and erosion site plans (or permits), or storm water management site plans (or permits).
### MAINTENANCE/INSPECTION PROCEDURES

#### Erosion and Sediment Control Inspection and Maintenance Practices

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls.

- Less than one half of the site will be denuded at one time.
- All control measures will be inspected at least once each week and following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report, or before the next predicted storm, if possible.
- Built up sediment will be removed from silt fence when it has reached one-third the height of the fence.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- The erosion basin will be inspected for depth of sediment, and built up sediment will be removed when it reaches 50% of the design capacity or at the end of the job.
- Diversion dikes will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and health growth.
- A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached.
- Mr. Doe, site superintendent, will select three individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.
- Personnel selected for inspection and maintenance responsibilities will receive training from Mr. Doe. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

#### Non-Storm Water Discharges

It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Water from water line flushing.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering excavation).

All non-storm water discharges will be directed to the sediment basin prior to discharge.

### ONSITE MATERIAL STORAGE INVENTORY

The materials or substances listed below are expected to be present onsite during construction:

<table>
<thead>
<tr>
<th>Material</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Cleaning solvents</td>
</tr>
<tr>
<td>Detergents</td>
<td>Roofing shingles</td>
</tr>
<tr>
<td>Paints (enamel and latex)</td>
<td>Fertilizers</td>
</tr>
<tr>
<td>Metal studs</td>
<td>Wood</td>
</tr>
<tr>
<td></td>
<td>Masonry block</td>
</tr>
</tbody>
</table>

### SPILL PREVENTION

#### Material Storage Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

**Good Housekeeping:**

- An effort will be made to store only enough product required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate container and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.

**Hazards:**

- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials.

**Product Specific Practices**

**Petroleum Products:**

- All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

**Fertilizers:**

- Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer.
- Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

**Paints:**

- All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

**Concrete Trucks:**

- Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

**Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from occurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- Mr. Doe, the site superintendent responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

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### DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO ENDANGERED SPECIES

On November 28, 2003, the Fish and Wildlife Service Office located in Center City, Any State was contacted via telephone to determine whether any listed endangered or threatened species are located on or near the construction site, or whether any critical habitat has been designated that overlap the construction site. Mary Smith, Field Supervisor of the Any State U.S. Fish and Wildlife Service’s Office, stated that no listed endangered or threatened species are on or around the construction site, nor has any portion of the site been designated critical habitat. Ms. Smith may be reached at (123) 867-9512. In accordance with this determination, box A was selected on the Notice of Intent Form.

### POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: John R. Quality, President Quality Associates

Date: February 23, 2004

### CONTRACTOR’S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

<table>
<thead>
<tr>
<th>Signature</th>
<th>For</th>
<th>Responsible for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Contractor, President</td>
<td>Center City Construction, Inc. 21 Elm Street Center City, Any State 00000 (123) 399-8765</td>
<td>General Contractor</td>
</tr>
<tr>
<td>John Planter, Vice President of Construction</td>
<td>Green Grass, Inc. 4233 Center Road Outerville, Any State 00001 (123) 823-5678</td>
<td>Temporary and Permanent Stabilization</td>
</tr>
<tr>
<td>Jim Kay, President</td>
<td>Dirt Movers, Inc. 523 Lincoln Ave. Outerville, Any State 00001 (123) 823-8921</td>
<td>Stabilized Construction Entrance, Earth Dikes Sediment Basin</td>
</tr>
</tbody>
</table>

### HOMERVILLE APARTMENTS

### STORM WATER POLLUTION PREVENTION PLAN

**INSPECTION AND MAINTENANCE REPORT FORM**

**TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE**

**INSPECTOR:** ____________________________ **DATE:** ____________________________

**INSPECTOR’S QUALIFICATIONS:**

---

**WEATHER INFORMATION SINCE LAST INSPECTION**

<table>
<thead>
<tr>
<th>STORM EVENTS</th>
<th>BEGINNING</th>
<th>END</th>
<th>DURATION</th>
<th>AMOUNT OF RAINFALL</th>
<th>DISCHARGE?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Was there a discharge at time of inspection? Yes/No (circle)
If yes, where? ________________ (location)

---

**STABILIZATION MEASURES**

<table>
<thead>
<tr>
<th>AREA</th>
<th>DATE SINCE LAST DISTURBED</th>
<th>DATE OF NEXT DISTURBANCE</th>
<th>STABILIZED? YES/NO</th>
<th>STABILIZED WITH</th>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLDG. A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLDG. B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLDG. C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRONG. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRONG. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRASS 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRASS 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STABILIZATION REQUIRED:**

---

**TO BE PERFORMED BY:** ____________________________ **ON OR BEFORE:** ____________________________

---

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STRUCTURAL CONTROLS/BMPS

DATE: _________________________

EARTH DIKE:

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLDG. B</td>
<td>STABILIZED CONSTRUCTION ENTRANCE</td>
</tr>
<tr>
<td>STABILIZED CONSTRUCTION ENTRANCE</td>
<td>SEDIMENT BASIN</td>
</tr>
</tbody>
</table>

MAINTENANCE REQUIRED FOR EARTH DIKE:

TO BE PERFORMED BY: _________________________ ON OR BEFORE: _________________________

SEDIMENT BASIN

<table>
<thead>
<tr>
<th>DEPTH OF SEDIMENT IN BASIN</th>
<th>CONDITION OF BASIN SIDE SLOPES</th>
<th>ANY EVIDENCE OF OVER-TOPPING OF THE EMBANKMENT?</th>
<th>CONDITION OF OUTFALL FROM SEDIMENT BASIN</th>
</tr>
</thead>
</table>

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

TO BE PERFORMED BY: _________________________ ON OR BEFORE: _________________________

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE:

<table>
<thead>
<tr>
<th>DOES MUCH SEDIMENT GET TRACTED ON 1/2 ROAD?</th>
<th>IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?</th>
<th>DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE?</th>
<th>IS THE CULVERT BENEATH THE ENTRANCE WORKING?</th>
</tr>
</thead>
</table>

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

TO BE PERFORMED BY: _________________________ ON OR BEFORE: _________________________

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:


REASONS FOR CHANGES:

______________________________

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE: _________________________ DATE: _________________________

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SAMPLE EROSION CONTROL PLAN
FOR SMALL SITES

SCALE: 1" = 10'

LEGEND

- PROPOSED STRUCTURE
- EXISTING STREET
- EXPERIMENTAL AREA
- PROPOSED STRIP
- CYLINDER MARKER
- DRAINAGE DITCH
- SWALE
- MAILBOX
- PROPERTY LINE
- SEEDING AND MULCHING

NOTES:
1. If construction is completed in areas for more than 30 days, mulch and seeds with temporary or permanent seeding.
2. Vegetative cover area to be immunized permanently seeded and mulched by owner at the completion of construction.

LOCATION:

SOURCE: WISCONSIN DEPARTMENT OF NATURAL RESOURCES

SEEDING AND MULCHING

- Spread 4 to 6 inches of topsoil.
- Fertilize according to soil test (or apply 8 lb/1000 sq. ft. of 20-12-12 or 12-12-12 fertilizer).
- Seed with an appropriate mix for the site (see table or contact Linn County SWCD).
- Rake lightly to cover seed with 1/4" of soil. Roll lightly.
- Mulch with straw (70-90 lb. or two bales per 1000 sq. ft.).
- Anchor mulch by punching 2 inches into the soil with a duff, weighted disk or by using netting or other measures on steep slopes, or wind areas.
- Water gently every day or two to keep soil moist. Less watering is needed once grass is 2 inches tall.

SODDING

- Spread 4 to 6 inches of topsoil.
- Fertilize according to soil test (or apply 8 lb/1000 sq. ft. of 20-12-12 or 12-12-12 fertilizer).
- Lightly water the soil.
- Lay sod, tamp or roll lightly.
- On slopes, lay sod starting at the bottom and work toward the top. Peg each piece down in several places.
- Initial watering should wet soil 6 inches deep (or until water stands 1 inch deep in a straight-sided container). Then water lightly every day or two for 2 week.

PRESEVING EXISTING VEGETATION

- Wherever possible, preserve existing trees, shrubs, and other vegetation.
- To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
- Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

REVEGETATION

- Seed, sod or mulch bare soil as soon as possible.

SOIL PILES

- Located away from any downslope street, driveway, stream, lake, wetland, ditch or drainageway.
- Temporary seed such as annual rye is recommended for topsoil piles.
- Surround with straw bales or silt fence.

GRAVEL DRIVE

- Install a single access drive using 3 to 5 inch aggregate over a geotextile material.
- Lay gravel 6 inches deep and 10 feet wide from the foundation to the street.
- Use to prevent tracking dirt onto the road by all vehicles.
- Maintain throughout construction until driveway is paved.
- Park all construction vehicles on the street and off of the site and do not drive across neighboring lots for access to the site.

SEDIMENT CLEANUP

- By the end of each work day, sweep or scrape soil tracked onto the road.
- By the end of the next work day after a storm, clean up soil washed off-site, and check straw bales and silt fence for damage or sediment buildup.

DOWNSPOUT EXTENDERS

- Not required, but highly recommended.
- Install as soon as gutters and downsputs are completed.
- Route water to a grassed or paved area.
- Maintain until a lawn is established.
Sample 3: Mississippi Department of Environmental Quality Sample Storm Water Pollution Prevention Plan (SWPPP) with Sample Site Map

Site Information

The construction of two commercial buildings and associated pavements will disturb 7.2 acres. Three-fourths of this site has a medium erosion hazard. The remainder of the site has 10 to 20 percent slopes that are highly erodible. An intermittent drain on the north end of the property drains the site to Any-Name Creek. Any-Name Creek stream is not on the 303(d) list for siltation, turbidity or habitat alterations; therefore additional controls that are warranted for a site discharging to listed receiving streams are not required.

Controls

Vegetative Controls: A 15-foot undisturbed vegetative buffer zone will be maintained around the perimeter of the site. Existing trees will be preserved where possible. All diversions will be seeded (permanent seeding) within seven calendar days of construction. Topsoil will be stockpiled for use in landscaping. Grass-lined waterways will be constructed and lined with temporary straw-net liners and will be constructed around both buildings. All 3:1 cut slopes will be roughened by discing prior to seeding. The slope on the south side of the intermittent stream will be sodded with Bermuda grass. Any disturbed areas that will be left undisturbed for thirty or more days will be seeded (temporary seeding) within seven calendar days. After final grading, all disturbed areas will be seeded (permanent seeding) within seven calendar days.

Structural Controls: A sediment basin will be constructed at the end of the existing intermittent drainage to the north (drainage area: 4.8 acres). A sediment basin will be constructed at the southwest corner of the property where runoff leaves the property. Storm water will be directed to these basins with the assistance of diversions and grassed waterways. Upslope waters will be diverted around disturbed areas. A level spreader will serve as the outlet for the diversion southeast of the buildings. All cut slopes will be at or below a 3:1 grade. A construction entrance will be built and any accumulation of mud on vehicle tires will be washed, if needed, during muddy conditions. Inlet protection (silt fences) will be installed at all storm drain inlets. A silt fence will be constructed around the stockpile. The eroding natural drainage way on the north end of the site will be lined with riprap (which is covered by a Nationwide Permit #13 – an individual 404 Permit is not required because the activity is less than 500 linear feet and has less than 1 cubic yard of rip rap per linear foot - no notification of Corps required). Riprap will be placed at all culvert outlet aprons. A sediment pond will be excavated for concrete trucks to wash the mixer chutes and a memo will be sent to the concrete supplier to use a minimum amount of water. Drivers will be instructed to return any material to the concrete batch plant and complete final washing procedures at that location.

Housekeeping Practices: All equipment maintenance and repair will be done offsite. Trash cans will be placed at convenient locations throughout the site. The main trash collection bin will be located on the northeast corner of the site and will be picked up weekly by the city. Paints, solvents, fertilizers, or any other potentially toxic materials will not be stored onsite. Portable sanitary facilities will be provided for construction workers.

Post Construction/Storm Water Management Measures: The temporary sediment basin will be converted to a detention basin after construction. Riprap will be placed at concentrated storm water discharge points to prevent erosion from high runoff velocities.

Implementation Sequence

1. Build construction entrance/exit
2. Install sediment basin with needed riprap
3. Contour and riprap intermittent drainage way to the north
4. Rough grade site, construct diversions and drainage ways, stockpile topsoil and install silt fence around stockpile, install culverts with inlet/outlet protection (silt fence), level spreader and riprap
5. Plant needed temporary vegetation on disturbed areas
6. Construct buildings and parking lots
7. Finish slopes around buildings, roughen slopes and vegetate
8. After site is stabilized, remove all temporary measures, vegetate these areas, and convert sediment basin to a detention basin

Maintenance Plan

Check all disturbed areas, erosion and sediment controls after each significant rainfall but not less than once per week. Make needed repairs within 24 hours. Remove sediment from the basin, inlet protection devices and silt fences when accumulated sediment has reached 50 percent capacity. Replace nonfunctional silt fence. Maintain all vegetated areas to provide proper ground cover - reseed, fertilize, and mulch as needed.
Worksheet 1 - Checklist Sheet for Erosion and Sediment Controls

To aid in choosing all needed controls, check off practices to be used. Describe in SWPPP and show locations on site map.

**STRUCTURAL PRACTICES**
- Check Dam
- Diversion
- Level Spreader
- Slope Drains
- Sediment Basin
- Slope Breaks
- Other Controls:
  - Construction Entrance/Exit
  - Storm Drain Inlet Protection
  - Lined Waterway
  - Riprap Outlet Protection
  - Silt Fence
  - Straw Bale Barrier

**VEGETATIVE PRACTICES**
- Mulching
- Protection of Trees
- Sod Stabilization
- Tree Preservation
- Vegetative Buffer Strips
- Other Controls:
  - Permanent Seeding
  - Surface Roughening
  - Temporary Seeding
  - Tillage, with Lime & Fertilizer

**CONTROLS FOR INDIVIDUAL LOTS IN SUBDIVISIONS**
- Subdivision Covenants
- Local Ordinance
- Other Controls:
  - Lot Purchase Contract
  - Architectural Review Requirements

**HOUSEKEEPING PRACTICES**
- Areas for Maintenance & Repair
- Storage for Toxic Materials
- Other Controls:
  - Waste Receptacles
  - Sanitary Facilities

**POST CONSTRUCTION CONTROL MEASURES**
- Detention Basin
- Wetlands
- Vegetated Swales & Natural Depressions
- Other Controls:
  - Retention Pond
  - Velocity Dissipation Devices
PRIME CONTRACTOR INFORMATION

PRIME CONTRACTOR CONTACT PERSON: Bob White
PRIME CONTRACTOR COMPANY: Sterling Incorporated
PRIME CONTRACTOR STREET OR P.O. BOX: PO Box 9901
PRIME CONTRACTOR CITY: Biloxi STATE: MS ZIP: 39501
PRIME CONTRACTOR PHONE #: (include area code) 228-343-8901

PROJECT INFORMATION

PROJECT NAME: Stevens Office Park

TOTAL ACREAGE THAT WILL BE DISTURBED? (To be covered by the Large Construction General Permit the disturbed area must be five (5) acres or greater or part of a larger common plan of development or sale that will disturb five (5) acres or greater): 7.2

DESCRIPTION OF CONSTRUCTION ACTIVITY:
Two commercial buildings and associated pavement

PROPOSED DESCRIPTION OF PROPERTY USE AFTER CONSTRUCTION HAS BEEN COMPLETED (include standard industrial classification code (SIC) if known): Office Park
SIC Code: 4658155

PHYSICAL SITE ADDRESS (If the physical address is not available indicate the nearest named road. For linear projects, indicate the beginning of the project and identify all counties the project traverses):

STREET: Teri Road
CITY: Biloxi COUNTY: Harrison
ZIP: 39501

NEAREST NAMED RECEIVING STREAM: Aley Name Creek

ARE THERE RECREATIONAL STREAMS, PRIVATE/PUBLIC PONDS OR LAKES WITHIN ¼ MILE DOWNSTREAM OR ABUTTING PROPERTY? No

EXISTING DATA DESCRIBING THE SOIL (for linear projects please describe in SWPPP):
Sandy Loam

Acreage for subdivision development includes areas disturbed by construction of roads, utilities and drainage. Additionally, a boustinct of at least 10,000 sf per lot (entire lot, if smaller) shall be included in calculating acreage disturbed.

Revised August 21, 2003
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND RAINWATER HARVESTING REQUIREMENTS

1. ATTACH A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) TO THIS CONSTRUCTION PERMIT. THIS PLAN MUST COMPLY WITH THE MINIMUM REQUIREMENTS OUTLINED IN THIS REGULATORY DOCUMENT AND MUST BE REVIEWED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ).

2. RAINWATER HARVESTING SYSTEMS MUST COMPLY WITH THE REQUIREMENTS OUTLINED IN THIS REGULATORY DOCUMENT.

3. INDICATE ANY ASSOCIATIONS OR OTHER PROGRAMS EMPOWERED TO PROTECT PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT THAT WILL BE INVOLVED IN THE MONITORING AND ENFORCEMENT OF THE SWPPP AND RAINWATER HARVESTING REQUIREMENTS.

4. A COMPLETE SWPPP AND RAINWATER HARVESTING PLAN MUST BE SUBMITTED TO THE AHJ FOR REVIEW AND APPROVAL. THIS PLAN MUST INCLUDE:

   a. A SWPPP THAT IDENTIFIES AND DESCRIBES THE STORM WATER SOURCE AND THE POTENTIAL FOR POLLUTION.
   b. A RAINWATER HARVESTING SYSTEM THAT MEETS THE REQUIREMENTS OUTLINED IN THIS REGULATORY DOCUMENT.
   c. A QUALIFIED PROFESSIONAL'S SIGNATURE Confirmed by the design and construction firm.

5. THE PLAN MUST BE REVIEWED AND APPROVED BY THE AHJ BEFORE THE CONSTRUCTION PERMIT IS ISSUED. THE AHJ MAY REQUIRE ADDITIONAL INFORMATION TO COMPLY WITH THIS REGULATORY DOCUMENT.

6. FAILURE TO COMPLY WITH THE REQUIREMENTS OUTLINED IN THIS REGULATORY DOCUMENT MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER OR OTHER ACTION TO ENFORCE THE LAW.
PRIME CONTRACTOR CERTIFICATION

By completing and submitting the Prime Contractor Certification (PCC) form, the prime contractor is certifying that (1) they have operated over the season and segment control specifications (including the ability to make modifications to such specifications) and (2) they have the ability to operate under applicable federal and state laws and regulations, and applicable permits.

PRIME CONTRACTOR INFORMATION

<table>
<thead>
<tr>
<th>NAME</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob White</td>
<td>228-343-6651</td>
</tr>
</tbody>
</table>

OWNER INFORMATION

<table>
<thead>
<tr>
<th>NAME</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles McDermott</td>
<td>228-125-5543</td>
</tr>
</tbody>
</table>

PROJECT INFORMATION

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>DESCRIPTION OF CONSTRUCTION ACTIVITY</th>
<th>PHYSICAL SITE ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stevens Office Park</td>
<td>Two commercial buildings and associated pavement</td>
<td>205 Ten Road, Harrison</td>
</tr>
</tbody>
</table>

CONSTRUCTION STORM WATER GENERAL PERMIT COVERAGE NUMBER: MSR10

Introduction

If construction site owners or operators do not comply with requirements to obtain coverage – whether under a storm water construction general permit or an individual permit – EPA and state authorities can take enforcement actions. For example, people who obtain coverage under a general permit will be subject to enforcement for failure to prepare a SWPPP before submitting an NOI. The agencies can also penalize people for failure to comply with the provisions of either a general or individual permit, once the permit has been issued.

EPA and state permitting agencies receive their enforcement authority from the Clean Water Act. The Clean Water Act also grants citizens the right to file suit to enforce provisions of the Act.

In states that implement the NPDES program themselves, the state agency generally handles the enforcement of its permit. However, if EPA officials believe enforcement action is warranted, they have the authority to proceed independently of the states. In the non-delegated states, the EPA regional offices are the primary enforcing agencies, and they enforce requirements directly. When EPA initiates enforcement actions, it normally refers both civil and criminal enforcement actions to the Department of Justice.

In 2001, EPA designated storm water enforcement a national enforcement priority, and in 2003, the Agency released its "2003 Storm Water Compliance and Enforcement Strategy." This increased activity stemmed from the Agency’s frustration with the low levels of compliance with its storm water regulations. In its 2000 Report to Congress on the Phase 1 Storm Water Regulations, EPA reported that out of all the construction sites required to obtain permit coverage under the Phase I rules, only about 1/3 actually obtained coverage.

In the face of increased enforcement activities, it is critical for builders and developers to make sure that they comply with all of the storm water regulations that apply to them. This chapter starts by covering what it takes to be in compliance, along with suggestions on how to comply with the storm water rules. The second section of this chapter explains the structure of EPA’s enforcement program, and then presents several programs that are available to permittees found in noncompliance. These programs can help permittees negotiate reduced fines, shorten the time period of enforcement actions, and produce educational programs and other resources in lieu of paying penalty fees to EPA.

Compliance

There are two main aspects of compliance with the storm water regulations: resource protection and record keeping. Both are equally important to EPA. Protecting resources through compliance with the storm water regulations means making sure that BMPs are in place and functioning, and that sediment, debris, oils, and other substances are not carried offsite by storm water. Compliance through record keeping means making sure that all the necessary actions have been documented, and all the requisite records are maintained. For example, the permittee’s records must show that a Notice of Intent has been filed, that a Storm Water Pollution Prevention Plan (SWPPP) has been developed correctly, inspections are recorded and the reports included with the SWPPP, the SWPPP and inspection reports are maintained on-site or at a designated location, and so forth, as applicable in each individual situation.
Compliance Assistance Tools From EPA

- Construction Industry Compliance Assistance Center (http://www.cica-center.org)
- A virtual assistance center created by EPA's Office of Compliance in partnership with NAHB, the Associated General Contractors of America, and other industry groups.
- National Compliance Assistance Clearinghouse (http://cdpub.epa.gov/clearinghouse/index.cfm)

State Compliance Assistance Resources

State programs typically have compliance materials as well – Appendix C contains a number of these materials. Some states require that all construction site operators complete a certification program, or they are required to obtain coverage under the construction general permit for storm water or will be responsible for overseeing the implementation and maintenance of BMPs. These programs typically consist of a daylong course on the storm water requirements and BMPs.

Tips on Compliance

- Before construction begins, make sure you've prepared a SWPPP that follows your permit's requirements exactly.
- Stay in communication with the people who implement your SWPPP, whether they are consultants or employees. Maintain oversight to ensure that BMPs are installed, inspected and maintained. Make sure that inspection reports are completed and attached to the SWPPP.
- Stay organized. Consider using a 3-ring binder for your SWPPP, in order to allow you to add inspection reports easily to the SWPPP as they are completed.
- Try to keep the SWPPP on the construction site if possible. Otherwise, keep a copy at your office in your vehicle, and/or with someone who is usually at the site. The person designated to do inspections must always have the SWPPP with him/her.
- Establish procedures for what happens when an inspector shows up on the construction site. For example, leave instructions at the site specifying who should be called when an inspector arrives (you, your consultant, etc.), along with the location of the SWPPP. For more information on how to plan for an inspector’s visit, please see How Builders & Developers Should Handle An Inspector’s Visit, an article originally published in Land Development magazine and reproduced in Appendix E of this Guide.
- Discuss your permit obligations and SWPPP details with all of your subcontractors and utility companies - before they arrive on your site, if possible. Incomplete contract language that requires the subcontractor to abide by your SWPPP while working at your site. Give the subcontractor a copy of the SWPPP and contact information for the person responsible for your SWPPP, so that the subcontractor may reach someone if there are questions or problems that need to be reported (e.g., malfunctioning BMP). Some states require subcontractors to become co-permittees or to certify that they will abide by the SWPPP or general permit requirements.
- Check your permit to find out whether it contains requirements about how to turn storm water management facilities over to the homeowner or homeowners association. Some states require builders and developers to give the homeowner or association information on how to maintain post-construction BMPs, such as retention ponds. Even where there are no permit requirements, it is a good idea to educate the property owner on the importance of keeping post-construction BMPs in good working order.

Enforcement

- Once construction is complete and the site is finally stabilized according to the specifications in the general permit, you are allowed to submit a Notice of Termination. Filing a Notice of Termination is required by the permit, and also ends your liability under the permit.

Structure of EPA's Enforcement Program

EPA enforces its storm water regulations through the 10 EPA Regions. Each Region covers approximately four to eight states and has considerable autonomy from EPA Headquarters over enforcement of the storm water regulations. Each region has agreements with the states within its jurisdiction. However, EPA always retains the right to pursue an enforcement action independently against an individual permit holder, even in a state with a delegated program. Contact information for each EPA Region can be found in Appendix F.

Schedule of EPA Enforcement Actions

EPA initiates enforcement actions in a number of different ways. An EPA inspector (or an inspector hired by EPA) may conduct an inspection of a construction site, which may give rise to the discovery of violations. A private citizen may file a complaint with EPA. EPA employees may drive past a construction site and find evidence of noncompliance; that cursory glance may imply that further information is needed, triggering the delivery of a Clean Water Act Section 308 letter, requesting storm water permit-related documentation. Because the determination that a violation exists is a legal decision, an inspector cannot make this determination at the time of the inspection. Instead, the inspector’s report must be reviewed by legal staff within the EPA Regional Office. The legal staff makes this determination and decide whether to issue an administrative order, initiate civil or criminal proceedings, or do nothing. More than a year may pass from the time the inspection, complaint, or Section 308 request, to the violation decision and/or penalty assessment.

Penalties

Agencies typically use four methods of enforcement, though states may have other methods to sue dischargers. The typical enforcement mechanisms are:

- Administrative Orders: These are issued by the state or EPA to people in violation of their permits or other CWA requirements. Penalties are normally determined through hearings. Administrative Orders may result in compliance schedules or administrative penalties, which are monetary payments
- Civil Actions: This is a lawsuit in court. It is initiated by the state or EPA against an alleged violator. Alleged violators are entitled to a jury trial. “Proof of violation” is needed to show that the CWA, its regulations, or the conditions of the permit are violated. Under the CWA, monetary penalties, injunctions, or compliance schedules may be imposed on a violator. Monetary fines may be as high as $32,500 per day per violation.
- Criminal Actions: These are prosecutions in court initiated by the state or EPA against owners and/or operators for willingly, knowingly, or negligently violating the Clean Water Act. Most criminal violations require some element of conscious wrongdoing or some criminal intent. Fines may include failure to maintain proper reporting records, failure to maintain...
**Similar Practices:**
None

**Regulatory Notes:**
Some states and localities have not yet embraced the use of sand filters in residential areas due to the generally poor maintenance record of homeowners associations (Source: Schueler, 1994a).

**Advantages of a Sand Filter:**
- Provides high removal efficiencies of particulates
- Requires minimal land area
- Flexibility to retrofit existing small drainage areas
- Higher removal of nutrients as compared to catch basins

**Disadvantages of a Sand Filter:**
- Not feasible for drainage areas greater than 5 acres
- Only feasible for areas that are stabilized and highly impervious
- Not effective as water quality control for intense storms
- Reduces particulate loading downstream, but soluble compounds will not decline, so other practices may be required

**STORM WATER MANAGEMENT**

**Wetland Treatment**

**Description and Purpose:**
The treatment of runoff by wetlands involves the passing of runoff through a constructed wetland, which removes or treats pollutants. Constructed wetlands, due to their unique characteristics, are able to trap sediment, assimilate pollutants and utilize nutrients through various biological mechanisms. Dense wetlands vegetation also slows the movement of water, increasing the amount of sediment that sinks to the bottom. Constructed wetlands are also an aesthetically pleasing means to control runoff, and may provide other benefits, such as wildlife habitat and flood control.

**Planning Considerations:**
- **Site Suitability:** Must have suitable hydrology for creation
  - Natural wetlands
- **Avoid:**
  - BMP Setting:
  - Lowest area of property
  - Consider location within watershed
- **Acreage Needed:** May be significant
- **Percent Removal of TSS:** Negative (≤2)-100% (median = 64.5%)
  - (Source: NAHB, 2002)
- **Design Life:** Permanent
- **Useful Life:** 50 years
- **Estimated Cost:** Varies with design and materials used

**Design/Construction Guidelines:**
- **Wetland Size:** The size of the wetland should be approximately 0.6-3% of the size of the contributing drainage area (Source: MNPCA, 2000).
- **Inlet:** Provide forebay to dissipate energy and trap coarse sediments. Forebay should be located in shallow portion of wetland and be 3 feet deep and comprise at least 10% of the wetland area.
- **Outlet:** Located in the deep portion of the wetland, and should use a barrel and riser to restrict discharge

**Operation/Maintenance Guidelines:**
Routine maintenance activities must be performed to ensure the proper functioning of detention ponds. Such activities include mowing grass and controlling vegetation, revegetating eroded areas and removing debris. Regular inspections should be performed to identify these maintenance needs and to identify the more intensive maintenance requirements, such as structural repairs and sediment cleanout.

**Similar Practices:**
Sediment Basins, Retention Ponds

**Regulatory Notes:**
A permit may be required at the Federal, state or local level to create wetlands to control runoff.
Advantages of Wetland Treatment:
- Can serve large developments and are most cost-effective for larger, more intensively developed sites
- Provides peak flow control
- Enhances aesthetics and provides recreational benefits
- Marsh fringe protects the shoreline from erosion
- Permanent pool helps to prevent scour and resuspension of sediments
- Has high pollutant removal capability

Disadvantages of Wetland Treatment:
- Not economical for drainage areas less than 10 acres
- Potential safety hazards if not properly maintained
- If not adequately maintained can be visually undesirable, breed mosquitoes, and create undesirable odors
- Requires considerable space, which limits use in densely urbanized areas or where land is expensive
- May contribute to nutrient loadings during die-down periods of vegetation

STORM WATER MANAGEMENT
Vegetated Swale

Description and Purpose:
Vegetated swales are broad shallow channels that are enhanced with a dense layer of vegetation and are designed to promote infiltration, slow runoff velocities, and trap pollutants. Due to their effectiveness in promoting infiltration, vegetated swales also assist in reducing the volumes of runoff and the peak discharges. Swales are most effective when the flow depth is shallow and the velocities are low (less than 10 ft/s). The flow in swales is often impounded by the installation of check dams.

Planning Considerations:
- Site Suitability: Most appropriate for slopes with gradients of 5% or less (Source: Maryland, 2000)
  - Soils with a soil infiltration rate of 0.27 inches/hour or greater (Source: MNPCA, 2000)
  - Water table/bedrock depth at least 2 feet below the bottom of the trench
- Avoid: Areas subject to concentrated flows and steep slopes
- BMP Rating: Long, relatively flat slopes where sheetflow occurs
- Acreage Needed: Minimal
- Percent Removal of TSS: 50 – 99% (median = 68%) (Source: NAHB, 2002)
- Design Life: Permanent
- Useful Life: 50 years
- Estimated Cost:
  - Established from Seed:
    - Average: $7.62/linear ft
    - Range: $5.27 – $9.96/linear ft
  - Established from Sod:
    - Average: $23.44/linear ft
    - Range: $9.38–$58.60/linear ft
    (Source: USEPA-840-B-92-002, 1993)*

Design/Construction Guidelines:
Vegetated swales are most appropriate for use in residential areas or other similar regions where the percentage of impervious cover is relatively small. Swales are typically located within drainage easements and can also be used along roads in place of curb and gutter.

Capacity:
- Must have sufficient capacity to convey the peak discharge rate of the design storm above the check dam.

Channel Shape:
There are 3 shapes used for the channel:
1) Triangular: used for small flows;
2) Parabolic: wide, shallow channel is easy to maintain and blends well with natural settings, and is well suited for large flows; and
3) Trapezoidal: used where deeper channels are needed to carry large flows; works well with rip rap and other structural linings

Side Slope:
Maximum side slopes should be determined based on the soils, type of flow, amount of flow and channel lining. In general, the slopes should not exceed the following criteria: (horizontal to vertical):
- Seeded grass: 3:1
- Sod: 3:1
- Riprap: 2:1
(Source: MNPCA, 2000)

*Figures are in 1985 cost information has been converted to 2003 dollars, using a conversion rate of 1.172.
Velocity: Should not exceed the permissible velocity for the type of vegetative lining used, as presented in Table VS-1. (Source: Maryland, 2000)

Channel Linings: Two types of lining are most commonly used:
1) Grass/Sod: The grass type should be appropriate for the site conditions. The vegetation should have a dense root system and be water tolerant.
2) Riprap: Design criteria for riprap may be determined by local regulation. Riprap should be of sufficient size to handle expected flows and velocities.

Outlet: Must be constructed and stabilized before operating the waterway. May consist of another waterway, a stabilized open channel, etc.

<table>
<thead>
<tr>
<th>Channel Slope</th>
<th>Lining</th>
<th>Permissible Velocity (ft/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5%</td>
<td>Reed canary grass, Tall fescue, Kentucky bluegrass, Grass-legume mixture</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Red fescue, Redtop, Sesbania Insedec, Annual Insede, Small grains</td>
<td>4</td>
</tr>
<tr>
<td>5-10%</td>
<td>Reed canary grass, Tall fescue, Kentucky bluegrass, Grass-legume mixture</td>
<td>4</td>
</tr>
<tr>
<td>Greater than 10%</td>
<td>Reed canary grass, Tall fescue, Kentucky bluegrass</td>
<td>3</td>
</tr>
</tbody>
</table>

Table VS-1: Permissible Velocities for Vegetated Channels
Source: Maryland, 2000

Regardless of the channel designed, the stability of the outlet must be checked in relation to the flow. If an overflow exists, some form of grade stabilization structure may be needed. Similarly, if the flow velocities exceed the allowable velocity of the receiving channel, a transition section or energy dissipation device may be needed. The soils in vegetated channels should ensure adequate drainage so that vegetation can become established. A subsurface drain or stone center may be required in poorly drained soils.

**Operation/Maintenance Guidelines:**
Vegetated swales should be inspected on a monthly basis to ensure proper functioning. Swales must be checked for signs of erosion, cutting and removal of vegetation. Any areas where erosion is occurring should be repaired or revegetated as necessary. Permanent vegetated channels should be mowed periodically to maintain their capacity.

**Similar Practices:**
Preservation of Mature Vegetation, Vegetated Buffer Strips

**Regulatory Notes:**
None

**Advantages of a Vegetated Swale:**
- Requires minimal land area
- Can be used as part of the runoff conveyance system to provide pretreatment
- Can provide sufficient runoff control to replace curb and gutter in single-family residential subdivisions and on highway medians
- Economical

**Disadvantages of a Vegetated Swale:**
- Low pollutant removal rates
- Leaching from culverts and fertilized lawns may increase the presence of trace metals and nutrients
GOOD HOUSEKEEPING

Construction Waste and Litter Control

Description and Purpose:
Construction projects generate an array of solid waste materials, including trees and shrubs removed during the land clearing stage, packaging materials, and scrap building materials. Waste control is the reduction and proper disposal of construction site waste before these materials are carried to surface waters. Clean job sites result in minimal amounts of trash and refuse finding its way into the runoff stream, thereby lowering maintenance and clean-up costs. Pollutants targeted in waste control include construction debris, leaves and lawn clippings trash, oil and chemicals, domestic wastes such as containers, beverage cans and cigarettes.

Estimated Cost:
Minimal

Recommendations:
- Provide a common trash area or receptacle for all workers to dispose of trash and debris
- Provide an adequate number of containers with lids or covers that can be placed over the container prior to rainfall
- Evaluate recycling opportunities for materials such as lumber and drywall, and salvage materials for reuse
- Regularly sweep streets of construction debris and sediment
- Arrange for waste collection before containers overflow
- Make sure that waste is collected, removed and disposed of only at authorized disposal areas

Regulatory Notes:
None

Advantages of Construction Waste and Litter Control:
- Inexpensive management practice
- Eliminates debris from surface waters

Disadvantages of Construction Waste and Litter Control:
- None

GOOD HOUSEKEEPING

Materials Storage

Description and Purpose:
Proper material storage is the isolation of potential pollutants from contact with storm water or runoff. Materials with high pollutant potential include concrete compounds, herbicides/pesticides, fertilizers, paints, solvents, chemical additives, gasoline and oil products, and topsoil.

Estimated Cost:
Minimal

Recommendations:
- Designate areas of the construction site for material delivery and storage
- Store material in a dry, covered area
- Handle potential contaminants as infrequently as possible
- Provide curbs or dikes to contain the contaminants, should any spill
- Follow recommended applicant rates and methods
- Contain and clean up any spills immediately
- Stockpile topsoil in a central location and revegetate or cover it with a tarp until it is needed

Regulatory Notes:
Some states and localities require trash to be picked up on a daily basis to prevent litter from being transported in storm water.

Advantages of Proper Materials Storage:
- Inexpensive
- Decreases material losses

Disadvantages of Proper Materials Storage:
- None
GOOD HOUSEKEEPING

Centralized Equipment Maintenance Area

Description and Purpose:
Vehicle and equipment maintenance should be performed at a specified centralized location within a construction site to ensure the containment of leaks and spills of pollutants. Where spills are likely to occur, maintenance should be performed on an impermeable surface, such as a concrete pad, so that pollutants cannot permeate the soil and enter the water stream. Equipment should be stored under a roofed structure so that rainfall will not come into contact with any contaminated surfaces.

Estimated Cost:
Minimal

Recommendations:
- Use off-site repair shops as much as possible
- These businesses are better equipped to handle vehicle fluids and spills properly
- Performing this work off-site can also be economical by eliminating the need for a separate maintenance area
- Perform regular equipment maintenance checks to prevent leakage
- Construct dikes around equipment maintenance areas
- Use absorbent materials on small spills rather than hosing down or burying the spill

Regulatory Notes:
None

Advantages of a Centralized Equipment Maintenance Area:
- Inexpensive
- Concentrates pollutants in one central area
- Simplifies spill clean up

Disadvantages of a Centralized Equipment Maintenance Area:
- May not be economical for small sites

Vehicle Wash-Down Station

Description and Purpose:
Vehicle wash-down stations are specified areas on a construction site where vehicle rinsing and washing are to occur, including the washout of concrete trucks. The provision of a wash-down station ensures that pollutants dislodged from vehicles will be concentrated in one area, thereby allowing simplified clean up.

Estimated Cost:
Rock Construction Entrance with Wash Rack:
Average: $3516
Range: $1172-5860
(Source: USEPA-804-B-92-002, 1993)

Recommendations:
- The specified wash-down station should be situated so that wash water does not come into contact with the storm water that is discharged from the site
- For example, dikes could be constructed around the area to contain the wash water until it can be disposed of properly
- Use as little water as possible to avoid having to install erosion and sediment controls for the wash area
- Use phosphate-free, biodegradable soaps

Regulatory Notes:
None

Advantages of Vehicle Washdown Stations:
- Concentrates pollutants in one area
- Low cost

Disadvantages of Vehicle Washdown Stations:
- Not economical for small sites
- Soaps used may contaminate waters

*The 1993 cost information has been converted to 2023 dollars, using a conversion rate of 1.172.
GOOD HOUSEKEEPING

Catch Basin Cleaning

Description and Purpose:
Catch basins provide an inlet for storm water runoff to enter the storm sewer system. Many basins have been designed to retain sediment and other debris so that this material does not clog the sewer or flow into the receiving waters. Because of this design, the low areas, which collect the debris, must be periodically cleaned out to maintain the catch basin's effectiveness in trapping such sediment and debris. Reports have shown that in some areas where catch basins have not been regularly cleaned, water quality conditions have declined.

Estimated Cost:
Minimal

Recommendations:
- The capacity of settling chambers in most catch basins vary from 0.5 to 1.5 cubic yards
- The frequency at which such basins must be cleaned depends on the size of the basin, the size of the contributing watershed, and the activities that occur within the watershed
- For example, if the watershed contains activities that generate high sediment loads, the basin will likely have to be cleaned more often than one located within a stabilized area
- All materials removed from the system must be disposed of properly

Regulatory Notes:
In many areas, developers are responsible for maintaining the storm water systems they install, including the cleaning of catch basins.

Advantages of Catch Basin Cleaning:
- Inexpensive
- Can eliminate costly retrofits of facilities in the future

Disadvantages of Catch Basin Cleaning:
- Sediments removed must be disposed of properly

GOOD HOUSEKEEPING

Fertilizer Management

Description and Purpose:
Fertilizer management includes the control of the method, rate and timing of fertilizer application so that plant nutrient needs are met and the chance of polluting surface or groundwater is minimized. Targeted primarily at the control of nitrogen and phosphorus, fertilizer management can effectively decrease the potential of these pollutants entering the water stream.

Estimated Cost:
Minimal

Recommendations:
- Have the soil tested and follow soil test recommendations
- Limit fertilizer application to the minimum area
- Limit fertilizer application to the minimum recommended amounts
- Work the fertilizer into the ground rather than letting it remain on the surface to decrease the potential for runoff
- Water the lawn or other fertilized surface after application, but do not allow the water to run off
- Limit hydroseeding
- Promptly clean up any spilled fertilizers
- Do not store directly on the ground, place on a pallet or other raised surface

Regulatory Notes:
Many localities provide recommended application rates and timing schedules.

Advantages of Fertilizer Management:
- Reduces nutrient loadings to receiving waters
- Inexpensive

Disadvantages of Fertilizer Management:
- None
GOOD HOUSEKEEPING

Street Sweeping

Description and Purpose:
Street sweeping involves the use of pavement cleaning practices to remove sediment and other debris from streets, roadways and parking lots in order to prevent sediment and debris from entering storm drains and eventually impacting receiving waters. Street sweeping is most effective in removing coarse particles, leaves and trash. A wide variety of technologies can be used to accomplish street sweeping, which range from sweeping by hand using brooms to self-propelled and walk-behind equipment.

Estimated Cost:
Varies depending on method used. Rental rates for self-propelled sweepers may range from $58/hour to $88/hour, plus operator costs (Source: CA BMP Handbook, 2003).

Recommendations:
- Sweeping methods can be used anywhere sediment is tracked onto public or private paved roads
- Potential sediment tracking locations should be inspected daily
- Street sweeping should be used to remove visible sediment tracking discovered during inspections

Regulatory Notes:
Some states and localities require trash to be picked up on a daily basis to prevent litter from being transported in storm water.

Advantages of Street Sweeping:
- Prevents pollutants, such as sediment and debris, from being introduced into to runoff, reducing the pollutant load of receiving waterbodies
- Can improve the aesthetics of a construction site and alleviate neighborhood concerns and complaints, as well as ensure that sediment tracked offsite does not create traffic hazards

Disadvantages of Street Sweeping:
- Can be costly and must be used frequently, often daily
- Some studies indicate that certain street sweeping technologies do not contribute significantly to preventing pollutants, like sediment, from entering waterbodies
- Sweeping and vacuuming can be less effective when sediment is wet or caked to paved surfaces
(Source: CA BMP Handbook, 2003)

GOOD HOUSEKEEPING

Dust Control

Description and Purpose:
Dust control consists of measures that help reduce surface and air movement of dust from disturbed soil surfaces, and prevent off-site damage, including human health hazards and traffic problems. Dust control is particularly important in arid regions and during drought conditions. Measures that can be used to control dust include the following:

- Sprinkling/Irrigation: the application of water to ground surfaces until they are wet
- Vegetative Cover: see the Vegetative Stabilization section of this Appendix for more information on specific measures to use to establish vegetative cover
- Mulch: see the Mulch section of this Appendix
- Wind Breaks: barriers that reduce wind velocity through a site; wind breaks can be natural, such as trees or shrubs, or can be constructed barriers such as a wind fence, hay bale, or sediment wall
- Tillage: used to bring soil clods to the surface, which prevents dust from becoming airborne
- Stone: can be used where vegetation cannot be established and for construction roads and entrances
- Sprayer Chemical Soil Treatments (palliatives): chemical treatments that suppress dust; examples include anionic asphalt emulsion, latex emulsion, resin-water emulsions and calcium chloride; chemical treatments should only be used on mineral soils (Source: USEPA-852-F-99-003, 1999)

Estimated Cost:
Varies widely depending on method used. The cost of using a chloride product is estimated to be $1089/acre for application to road surfaces (Source: USEPA-821-R-02-007, 2002).

Recommendations:
- Construction sequencing and minimization of disturbed areas can greatly reduce the need for dust control measures
- Sprinkling/Irrigation and chemical application should be monitored regularly to ensure effectiveness
- The following table provides recommended applications rates for several spray-on adhesives:

<table>
<thead>
<tr>
<th>Spray-On Adhesive</th>
<th>Water Dilution</th>
<th>Type of Nozzle</th>
<th>Application (gal/ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anionic Asphalt Emulsion</td>
<td>7:1</td>
<td>Coarse Spray</td>
<td>1000</td>
</tr>
<tr>
<td>Latex Emulsion</td>
<td>12:1</td>
<td>Fine Spray</td>
<td>250</td>
</tr>
<tr>
<td>Resin in Water</td>
<td>4:1</td>
<td>Fine Spray</td>
<td>500</td>
</tr>
</tbody>
</table>

(Source: Stolen et al., 1988, as cited in USEPA-852-F-99-003, 1999)

Regulatory Notes:
Dust escaping from construction sites, known as "particulate matter," can sometimes be a regulated emission in certain areas. Consult your state Air Quality agency for more information. EPA's Construction General Permit and many state permits require the SWPPP to contain a description of measures to minimize the generation of dust.
Advantages of Dust Control:
- Sprinkling/irrigation can be a very cost-effective method to control dust and can be applied to almost any site
- Frequently, other measures that are already used on the site, such as vegetative covers, mulching, and construction sequencing can also serve as dust control measures
- Mulch can reduce wind erosion by up to 80 percent (Source: USEPA-832-F-99-003, 1999)
- Polymer stabilization methods range from 70 percent to 90 percent effectiveness (Source: USEPA-832-F-99-003, 1999)

Disadvantages of Dust Control:
- If evaporation rates are high, water application to exposed soils may require constant attention
- If chemical applications are not used sparingly or on non-mineral soils, their application may result in an additional risk to surface water through contaminated runoff or groundwater

PLANNING MEASURES
Environmental Site Planning

Description and Purpose:
Environmental site planning involves the use and/or avoidance of natural features such as natural drainage contours, dense vegetation, steep slopes and water amenities. Proper planning limits the amount of disturbance to these critical areas and retains the natural character and aesthetics. Because disturbances are minimized, erosion potential is reduced and the area’s natural processes to filter out pollutants and direct runoff flow remain intact.

Estimated Cost:
Varies, but should result in reduced development costs

Recommendations:
- Study the total drainage area in the planning phase to begin the process of natural features
- Generally, street and lot patterns and grades should be designed around natural drainage routings to avoid excessive land development expenses, promote increased infiltration and slow runoff velocity, and preserve and enhance environmental values

Regulatory Notes:
Local policies may require setbacks from critical areas, such as floodplains, riparian areas and wetlands.

Advantages of Using Natural Features:
- Reduces the amount of land disturbance that must take place, which reduces the pollutant potential
- Preserves critical natural areas
- Can reduce development costs

Disadvantages of Using Natural Features:
- May adversely impact natural habitats and ecosystem functions
- May limit the amount of usable land
PLANNING MEASURES

Landscaping

Description and Purpose:
A properly designed landscape can improve an area’s effectiveness in removing pollutants by decreasing runoff velocities, increasing infiltration and routing storm water runoff through green areas and away from erosion prone slopes and other areas. For example, ornamental pools act to detain water and filter out sediments, while rock gardens and mulched areas reduce flow velocity and encourage infiltration. In addition, the selection of site-adaptive and native plants often reduces the need for maintenance, fertilizers, pesticides and irrigation.

Estimated Cost:
Varies; can be very inexpensive if existing vegetation is used

Recommendations:
- Consider the site’s soils and drainage, and the area’s climate in the design of the landscape
- Special attention should be paid to existing vegetation, prevailing wind direction, slope, available water, existing and proposed impervious areas and proximity to street
- Proper soil preparation, seed, shrub and tree distribution and fertilization is essential to successful vegetation efforts
- In areas with slopes greater than 3:1 or where concentrated flow is expected to occur, landscaping which includes either dense vegetation or rock structures should be proposed
- Watering of any vegetation shall continue until the vegetation is established

Regulatory Notes:
None

Advantages of Landscaping:
- Reduces peak runoff rates
- Can provide for groundwater recharge
- Adds beauty and can be a visual amenity
- Can increase property values

Disadvantages of Landscaping:
- Can be expensive
- May require regular maintenance
- Can pollute water sources due to inappropriate application of lawn and garden chemicals

PLANNING MEASURES

Street Design

Description and Purpose:
The design of streets and roadways can affect the storm water runoff characteristics in any given area. Designing streets to be of minimal width decreases the amount of impervious area created by the roadway, thereby decreasing runoff volume and increasing infiltration. Curbs and gutter requirements also add to the design of streets and roadways.

Estimated Cost:
Varies, but should reduce development costs

Recommendations:
- Streets should be designed to minimize storm water runoff and promote infiltration
- Gravel and porous pavement allows infiltration, but may not be appropriate for heavily traveled roadways
- Consider the use of vegetated swales, as they are generally less expensive to install than curbs and gutters, and they keep the storm water flow away from the street surface during storm events, thereby reducing driving hazards

Regulatory Notes:
Street requirements are generally imposed at the local level. In areas where wide streets, curbs and gutter, and sidewalks are required, attempts to get the requirements changed so that such structures are no long required should be initiated. In a few states, state regulations control local street design. Impervious surface reduction initiatives can also be integrated into local policies, especially street and parking regulations.

Advantages of Street Design:
- Reduces development costs
- May eliminate the need for other costly storm water management facilities
- Reduces the amount of impervious cover, reducing peak flows and increasing infiltration
- Requires no additional land area

Disadvantages of Street Design:
- Local regulations may not allow reduced widths
PLANNING MEASURES

Cluster Development

Description and Purpose:
Cluster development refers to a compact pattern of development at a site in which development is concentrated on a small area of the project site, leaving other areas in the development in its natural state. Clustering generally preserves the topographic features of a site and preserves open space and existing vegetation. These practices reduce the amount of both land disturbance and the creation of impervious surfaces, which, in turn, reduces the amount of erosion and runoff. Clustering also reduces the size of storm water quantity and quality controls and concentrates the runoff where it can be most effectively treated.

Estimated Cost:
Varies, but should be lower than conventional subdivisions; can reduce capital cost of development by 10-33%. (Source: Schueler, 1994b)

Recommendations:
- The design of cluster development begins in the planning phase with a study of the natural site features and an examination of local policies.
- Performance criteria for cluster design to protect watersheds, adaptable to 0.5 - 5 acre residential zoning categories include the following:
  - Minimum site size: 5 acres
  - Minimum lot size: 10,000 square feet
  - Required open space: 33% of total net site area
  - Green space: No less than 50% of open space
  - Recreation space: No more than 50% of open space
  - The use of green spaces should be limited to preserve existing vegetation, but the siting of storm water BMPs may be allowed
  - Use of the recreation space should be restricted to limit the creation of impervious surfaces and to minimize extensive turf areas (Source: Schueler, 1994b)

Regulatory Notes:
Local zoning regulations may require modifications to allow cluster development because, although the overall density remains the same in clusters, clustering requires flexibility in design that may not be permitted under existing local zoning codes.

Advantages of Cluster Development:
- Reduces amount of impervious cover, volume of runoff and discharge of pollutants
- Preservation of vegetation and open space encourages infiltration
- Reduces development costs

Disadvantages of Cluster Development:
- May not be allowed in all localities
- Uncertain marketability
### Arkansas-1422 (All but Oil and Gas Related Wells)
- **Contact:** Robert Allen  
  Email: allenr@aoeg.state.ar.us  
  Phone: 501-682-0646  
  Fax: 501-682-0910  
- **Agency:** Arkansas Department of Environmental Quality  
- **Address:** PO Box 8913  
  Little Rock, AR 72219-8913  
- **Web site:** [http://www.aoeg.state.ar.us/water/branch_permits/default.htm](http://www.aoeg.state.ar.us/water/branch_permits/default.htm)


### Arkansas-1425 (Oil and Gas Related Wells)
- **Contact:** Gary Looney  
  Email: gary@aoeg.state.ar.us  
  Phone: 870-862-4965  
  Fax: 870-862-8823  
- **Agency:** Arkansas Oil and Gas Commission  
- **Address:** PO Box 1472  
  El Dorado, AR 71731  
- **Web site:** [http://www.aoeg.state.ar.us/](http://www.aoeg.state.ar.us/)


### California-1425 (Oil and Gas Related Wells)
- **Contact:** Mike Steitner  
  Email: steitner@conserv.ca.gov  
  Phone: 916-323-1781  
  Fax: 916-323-0424  
- **Agency:** CA Division of Oil, Gas and Geothermal Res.  
- **Address:** 801 K St., MS 20-20  
  Sacramento, CA 95814-3530  
- **Web site:** [http://www.conserv.ca.gov/](http://www.conserv.ca.gov/)

### California-DI (All but Oil and Gas Related Wells)
- **Contact:** Liz Jones  
  Email: janes.elizabeth@epa.gov  
  Phone: 415-972-3537  
  Fax: 415-947-3549  
- **Agency:** USEPA Region 9  
- **Address:** 75 Hawthorne St.  
  San Francisco, CA 94105-3901  
- **Web site:** [http://www.epa.gov/region9/water/](http://www.epa.gov/region9/water/)

### California-Indians (All Wells)
- **Contact:** Lisa Penaska  
  Email: penaska.lisa@epa.gov  
  Phone: 415-972-3544  
- **Agency:** USEPA R9  
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  San Francisco, CA 94105-3901  
- **Web site:** [http://www.epa.gov/region9/water/](http://www.epa.gov/region9/water/)

### Colorado-1425 (Oil and Gas Related Wells)
- **Contact:** Morris Bell  
  Email: morris.bell@state.co.us  
  Phone: 303-894-2100  
  Fax: 303-894-2109  
- **Agency:** Colorado Oil and Gas Conservation Commission  
- **Address:** 1120 Lincoln St., Suite 801  
  Denver, CO 80203  
- **Web site:** [http://oil-gas.state.co.us/](http://oil-gas.state.co.us/)

### Colorado-DI (All but Oil and Gas Related Wells)
- **Contact:** Paul Osborne  
  Email: osborne.paul@epa.gov  
  Phone: 303-312-6125  
  Fax: 303-312-7084  
- **Agency:** USEPA Region 8  
- **Address:** 1575 Circle Dr., Suite 500  
  Denver, CO 80202-2466  
- **Web site:** [http://www.epa.gov/Region8/water/uic/index.html](http://www.epa.gov/Region8/water/uic/index.html)

### Connecticut-1422 (All Wells)
- **Contact:** Richard Mason  
  Phone: 860-424-3018  
  Fax: 860-424-4057
- **Agency:** Connecticut Department of Environmental Protection  
- **Address:** Bureau of Water Management, 79 Elm St.  
  Hartford, CT 06106-5127  
- **Web site:** [http://dep.state.ct.us/wtr/index.htm](http://dep.state.ct.us/wtr/index.htm)

### Delaware-1422 (All Wells)
- **Contact:** Ronald Graeber  
  Email: rgraeber@state.de.us  
  Phone: 302-739-4762  
  Fax: 302-739-7364
- **Agency:** DE Dept. of Natural Resources and Env. Control  
- **Address:** Ground Water Dis. Sect.-89 Kings Hwy., PO Box 1401  
  Dover, DE 19901  
- **Web site:** [http://www.deerest.state.de.us/water2000/Sections/GroundWat/DNWRGmdWater.htm](http://www.deerest.state.de.us/water2000/Sections/GroundWat/DNWRGmdWater.htm)

For more information, contact Region 3: [http://www.epa.gov/reg3swpd/dinkingwater/uic/index.htm](http://www.epa.gov/reg3swpd/dinkingwater/uic/index.htm)

### District of Columbia-DI (All Wells)
- **Contact:** Karen Johnson  
  Email: johnson.karend@epa.gov  
  Phone: 215-814-5445  
  Fax: 215-814-2302
- **Agency:** USEPA R3 (3WPS2)  
- **Address:** SDWA Branch-1650 Arch St.  
  Philadelphia, PA 19103  
- **Web site:** [http://www.epa.gov/reg3swpd/dinkingwater/uic/index.htm](http://www.epa.gov/reg3swpd/dinkingwater/uic/index.htm)

### Florida-1422 (All but Oil and Gas Related Wells)
- **Contact:** Rich Deuerling  
  Email: deuerling.rj@dep.state.fl.us  
  Phone: 850-521-9417  
  Fax: 850-521-5655
- **Agency:** Florida Department of Environmental Protection  
- **Address:** Twin Towers Office Bldg-2600 Blair Stone Rd.  
  Tallahassee, FL 32399-2400  
- **Web site:** [http://www.dep.state.fl.us/water/wastewater/uic/index.htm](http://www.dep.state.fl.us/water/wastewater/uic/index.htm)

For more information, contact Region 4: [http://www.epa.gov/region4/water/uic/](http://www.epa.gov/region4/water/uic/)

### Florida-DI (Oil and Gas Related Wells)
- **Contact:** Bill Mann  
  Email: mannbill@epa.gov  
  Phone: 404-962-9432  
  Fax: 404-962-9439
- **Agency:** USEPA R4 - Atlanta Federal Center  
- **Address:** 61 Forsyth St., SW  
  Atlanta, GA 30303  

For more information, contact Region 4: [http://www.epa.gov/region4/water/uic/](http://www.epa.gov/region4/water/uic/)
Georgia-1432 (All Wells)
Contact Bijan Rahbar  Email bijan_rahbar@dnr.state.ga.us
Phone 404-656-3229
Agency Georgia Environmental Protection Division-GGS
Address Room 400-19 Martin Luther King, Jr. Dr. SW
Atlanta, GA 30334
Web site http://www.georgiastate.org/dnr/environment/
For more information, contact Region 4:  http://www.epa.gov/region4/water/uic/

Hawaii-Dl (All Wells)
Contact Shannon Fitzgerald  Email fitzgerald.shannon@epa.gov
Phone 415-976-3525
Agency USEPA Office of Water
Address 75 Hawthorne St.
San Francisco, CA 94105
Web site http://www.epagov/regiion9/water/

Idaho-1422 (All Wells)
Contact Mike Piechowgi  Email mpiechowi@idwr.state.id.us
Phone 208-327-7956
Agency Idaho Department of Water Resources
Address 1301 North Orchard Street
Boise, ID 83706
Web site http://www.idwr.state.id.us/
For more information, contact Region 10:  http://www.epagov/regiion10/

Illinois-1423 (All but Oil and Gas Related Wells)
Contact Bur Filion  Email epa4163@epa.state.il.us
Phone 217-782-6070
Fax 217-544-5291
Agency Illinois Environmental Protection Agency Bureau of Land
Address 1021 N. Grand Av. East
Springfield, IL 62794-9276
For more information, contact Region 5:  http://www.epagov/region5/water/uic/uic.htm

Indiana-1425 (Oil and Gas Related Wells)
Contact Lawrence Bengari  Email lbergari@dnrmail.state.in.us
Phone 217-782-1596
Agency Illinois Dept. of Natural Resources/Div. of Oil and Gas
Address 300 W. Jefferson, Suite 300, PO Box 10140
Springfield, IL 62791-0140
Web site http://www.dnr.state.il.us/mines/dogprogram_uic.htm
For more information, contact Region 5:  http://www.epagov/region5/water/uic/uic.htm

Indiana-1425 (Oil and Gas Related Wells)
Contact Mike Nickolaus  Email mnickolaus@dnrstate.in.us
Phone 317-232-4058
Fax 317-232-1550
Agency Indiana Dept. of Natural Resources/Oil and Gas Division
Address 402 W. Washington St., Room W293
Indianapolis, IN 46204
Web site http://www.in.gov/dnroll/organiza.htm
For more information, contact Region 5:  http://www.epagov/region5/water/uic/uic.htm

Indiana-D1 (All but Oil and Gas Related Wells)
Contact Lisa Perenchio  Email lperenchio@epa.gov
Phone 312-886-6593
Agency USEPA Region 5
Address 77 West Jackson Blvd.
Chicago, IL 60604-3590

Iowa-DI (All Wells)
Contact Kurt Hildebrandt  Email hildebrandt.kurt@epagov
Phone 915-551-7413
FAX 915-551-7003
Agency USEPA Region 7 WOPD/DWEW
Address 901 N. 5th Street
Kansas, KS 66101
Web site http://www.epagov/region7/water/contact.htm

Kansas-1422 (All but Oil and Gas Related Wells)
Contact Kirk Hoefnner  Email khoefnner@kdhe.state.ks.us
Phone 785-296-1843
Fax 785-296-5309
Agency Kansas Dept of Health and Environment-Ind/Prog.5e
Address Forbes Field
Topeka, KS 66620
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Kentucky-DI (All Wells)
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Atlanta, GA 30303
For more information, contact Region 4:  http://www.epagov/region4/water/uic/

Louisiana-1422 (All but Oil and Gas Related Wells)
Contact Joe Bell  Email joebbell@dnr.state.la.us
Phone 225-342-5561
Fax 225-342-5561
Agency Louisiana Department of Natural Resources
Address PO Box 94275
Baton Rouge, LA 70804-9275
Web site http://www.dnr.state.la.us/
For more information, contact Region 6:  http://www.epagov/region6/water/swp/uic/uic/index.htm
Maine-1422 (All Wells)
Contact Tammy Gould Email tammy.gould@maine.gov
Phone 207-287-7814 Fax 207-287-7191
Agency Maine Department of Environmental Protection
Address Bureau of Water Quality Control State House State 17
Augusta, ME 04333
Web site http://www.state.me.us/dep/bwq/docstand/uic/uichome.htm

Maryland-1422 (All Wells)
Contact Ching-Tzone Tien Email tien@wmadom.mde.state.md.us
Phone 410-631-3323 Fax 410-631-4894
Agency MD Department of the Environment-WMA
Address GW Discharge Permits Div 2500 Broening Hwy.
Baltimore, MD 21224
Web site http://www.mde.state.md.us/Water/index.asp
For more information, contact Region 3: http://www.epa.gov/reg3/wapid/dinkingwater/uic/index.htm

Massachusetts-1422 (All Wells)
Contact Kenneth Pelletier Email kpenillet@state.ma.us
Phone 617-548-4014 Fax 617-292-5696
Agency Massachusetts Department of Environmental Protection
Address Division of Water Supply-One Winter Street, 6th Fl
Boston, MA 02108
Web site http://www.state.ma.us/dep/brp/dws/uic.htm

Michigan-DI (All Wells)
Contact Marietta Newell Email newell.marietta@epa.gov
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Agency USEPA R5
Address 77 West Jackson Blvd.
Chicago, IL 60604-3590

Mille Lacs-DI (All Wells)
Contact Scott Hansen
Phone 320-532-7721 Fax 320-532-7442
Agency MN Department of Natural Resources and Environment
Address HCR 67 Box 194
Onamia, MN 56359
Web site http://www.millelacsojibwe.org/
For more information, contact Region 5: http://www.epa.gov/region5/water/uic/uic.htm

Minnesota (All Wells)
Contact Helen Lenart Email lenart.helen@epa.gov
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Mississippi-1422 (All but Oil and Gas Related Wells)
Contact Jimmy Sparks Email jimmysparks@deq.state.ms.us
Phone 601-961-5640 Fax 601-354-6612
Agency Mississippi Department of Environmental Quality
Address Ground Water Section, PO Box 10385
Jackson, MS 39299
Web site http://www.deq.state.ms.us/MDEQ.ndp/page/Main_Home?OpenDocument
For more information, contact Region 4: http://www.epa.gov/region4/water/uic/

Mississippi-1425 (Oil and Gas Related Wells)
Contact Lisa Ivshin Email linshvin@ogb.state.ms.us
Phone 601-354-7129
Agency Mississippi Oil and Gas Board
Address 300 Greymont Ave, Suite E
Jackson, MS 39202
Web site http://www.ogb.state.ms.us/
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Missouri-Both (All Wells)
Contact Evan Kifer Email nkifer@mail.dnr.state.mo.us
Phone 573-368-2170 Fax 573-368-2111
Agency Division of Geology and Land Survey
Address PO Box 250
Rolla, MO 65402
Web site http://www.dnr.state.mo.us/homednr.htm

Montana-Class II Indians (Oil and Gas Related Wells)
Contact Douglas Minter Email minter.douglas@epa.gov
Phone 303-312-6079
Agency USEPA R8
Address 8P-GW-DW 99 18th St, Suite 501
Denver, CO 80202-2467

Montana-1425 (Oil and Gas Related Wells)
Contact Tom Richmond Email trichmond@state.mt.us
Phone 406-656-0040
Agency Montana Board of Oil and Gas Conservation
Address 2535 St John's Avenue
Billings, MT 59102
Web site http://bgc.dncr.state.mt.us/

Montana-DI (All but Oil and Gas Related Wells)
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Denver, CO 80202-2467
Navajo-DI (All Wells)
Contact Jim Walker
Phone 505-599-6317
Agency USEPA Region 9
Address c/o BMU 1235 La Plata Hwy.
Farmington, NM 87401
Web site http://www.epa.gov/region09/water/

Nebraska-1422 (All but Oil and Gas Related Wells)
Contact Dave Miesbach
Phone 402-471-2186
Fax 402-471-2909
Agency Department of Environmental Protection Suite 400
Address 1200 N Street, The Atrium-PO Box 98922
Lincoln, NE 68509
Web site http://www.deq.state.ne.us/

Nebraska-1425 (Oil and Gas Related Wells)
Contact Stan Belieu
Phone 308-254-6919
Fax 308-254-6922
Agency Nebraska Oil and Gas Conservation Commission
Address PO Box 399
Sidney, NE 69162
Web site http://www.oil-gas.state.ne.us/

Nevada-1422 (All Wells)
Contact Russ Land
Phone 775-667-9428
Fax 775-667-4684
Agency NV Dept. of Environmental Protection
Address 335 W. Nye Lane, Room 129
Carson City, NV 89706-0851
Web site http://ndep.nv.gov/bwp/pui/c01.htm

New Hampshire-1422 (All Wells)
Contact Mitch Locker
Phone 603-271-2858
Fax 603-271-2181
Agency New Hampshire Dept. of Environmental Services
Address Ground Water Protection Bureau-PO Box 95,6 Haven D
Concord, NH 03301
Web site http://www.des.state.nh.us/dwswpp/

New Jersey-1422 (All Wells)
Contact Fred Bowers
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Fax 609-684-2147
Agency NJ Department of Environmental Protection-DWQ
Address PO Box 029-401 East State St., Floor 2
Trenton, NJ 08625-0029
Web site http://www.state.nj.us/dpw/dwq/nspoint.htm
For more information, contact Region 2: http://www.epa.gov/region02/gis/projectapps/uic.htm

New Mexico-1422 (All but Oil and Gas Related Wells)
Contact Karen Menetray
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Fax 505-827-2965
Agency NM Environment Department
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Santa Fe, NM 87502
Web site http://www.nmenv.state.nm.us/gwq/Uic1.htm
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/uic/index.htm

New Mexico-1425 (Oil Gas Related Wells)
Contact William V. Jones
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Santa Fe, NM 87505
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For more information, contact Region 6: http://www.epa.gov/region6/water/swp/uic/index.htm

New York
Contact Charles Hillenbrand
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Phone 212-637-4226
Fax 212-637-4211
Agency USEPA R2
Address Ground Water Compliance Section-290 Broadway
New York, NY 10007-1866
Web site http://www.epa.gov/region2/water/grndtop.htm
For more information, contact Region 2: http://www.epa.gov/region2/gis/projectapps/uic.htm

New York-DI (All Wells)
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Web site http://www.epa.gov/region2/water/grndtop.htm
For more information, contact Region 2: http://www.epa.gov/region2/gis/projectapps/uic.htm

North Carolina-1422 (All Wells)
Contact Evan Kane
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Agency North Carolina Dept. of Environment and Natural Resources
Address PO Box 29535
Raleigh, NC 27626-0535
Web site http://gwehr.state.nc.us/uic.htm
For more information, contact Region 4: http://www.epa.gov/region4/water/uic/

North Dakota-1422 (All but Oil and Gas Related Wells)
Contact Scott Radig
Phone 701-328-5233
Fax 701-328-5200
Agency North Dakota Department of Health
Address Division of Water Quality - 1200 Missouri Avenue
Bismarck, ND 58504
Web site http://www.health.state.nd.us/wq/gw/uic.htm
North Dakota-1425 (Oil and Gas Related Wells)
Contact Mark Bohrer  Email mb@saturn.ndic.state.nd.us
Phone 701-328-8020  Fax 701-328-8022
Agency North Dakota Industrial Commission - Oil & Gas Division
Address Dept 405, 600 East Blvd
Bismarck, ND 58505
Web site http://www.oilgas.nd.gov

Ohio-1422 (All but Oil and Gas Related Wells)
Contact Lindsay Taliferro  Email lindsay.taliferro@epa.state.oh.us
Phone 614-644-2771  Fax 614-644-2909
Agency OH EPA
Address PO Box 1049
Columbus, OH 43224
Web site http://www.epa.state.oh.us/oddeq/ucid.html
For more information, contact Region 5: http://www.epa.gov/region5/water/ucid/ucid.htm

Ohio-1425 (Oil and Gas Related Wells)
Contact Tom Tomasik  Email tom.tomasik@dnr.state.oh.us
Phone 614-265-1032  Fax 614-265-7998
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Address Fountain Square
Columbus, OH 43224
Web site http://www.dnr.state.oh.us/odnr/oil-gas/programs.html
For more information, contact Region 5: http://www.epa.gov/region5/water/ucid/ucid.htm

Oklahoma-1422 (All but Oil and Gas Related Wells)
Contact Saba Tahmassebi  Email saba.tahmassebi@deq.state.ok.us
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Agency OK Dept of Environmental Quality
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Oklahoma City, OK 73101-1677
Web site http://www.deq.state.ok.us/LPDnew/ucidindex.html
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/ucid/ucid.htm

Oklahoma-1425 (Oil and Gas Related Wells)
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Agency OK Corporation Commission
Address PO Box 53000-2000
Oklahoma City, OK 73152-2000
Web site http://www.occ.state.ok.us/
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/ucid/ucid.htm

Oregon-1422 (All Wells)
Contact Barbara Priest  Email priest.barbara@deq.state.or.us
Phone 503-229-5945  Fax 503-229-5408
Agency Oregon Department of Environmental Quality
Address UIC Program - 811 SW Sixth Ave.
Portland, OR 97204
Web site http://www.deq.state.or.us/vq/groundwv/uihome.htm
For more information, contact Region 10: http://www.epa.gov/region10/

Osage-DI (All Wells)
Contact Norma Pinney  Email rpinney@osagetribe.org
Phone 918-287-4041  Fax 918-287-2322
Agency US EPA Region 6
Address P.O. Box 1495
Pawhuska, OK 74056
Web site http://www.epa.gov/earth1r6/water/index.htm
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/ucid/ucid.htm

Pacific Islands: American Samoa
Contact Carl Goldstein  Email Fax 415-947-3560
Phone 415-972-3767
Agency US EPA Region 9
Address 75 Hawthorne St.
San Francisco, CA 94105
Web site http://www.epa.gov/region9/water/

Pacific Islands: CNMI - Mariana Islands (All Wells)
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Pacific Islands: Guam
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Web site http://www.epa.gov/region9/water/

Pennsylvania-DI (All Wells)
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Philadelphia, PA 19103
Web site http://www.epa.gov/reg3swp/drinkingwater/ucid/index.htm

Puerto Rico-1422 (All Wells)
Contact Roberto Aljai  Email jcaaguac@prtc.net
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Agency Puerto Rico Environmental Quality Board Water Quality Program
Address Ponce de Leon Ave., National Plaza Blvd 12th Fl. 431
Hato Rey, PR 00917
For more information, contact Region 2: http://www.epa.gov/region02/gis/projectappx/uid.htm
Rhode Island-1422 (All Wells)
Contact: Terry Simpson  Email: tsimpson@dem.state.ri.us
Phone: 401-222-3961  Fax: 401-521-4230
Agency: Rhode Island Dept. of Environmental Management
Address: Office of Water Resources-235 Promenade St.
Providence, RI 02908
Web site: http://www.state.ri.us/dem/programs/benviron/water/index.htm

South Carolina-1422 (All Wells)
Contact: Todd Adams  Email: edamsrt@gw.state.sc.us
Phone: 803-898-3549  Fax: 803-898-4190
Agency: Department of Health and Environmental Control
Address: Ground Water Protection Division-2600 Bull St.
Columbia, SC 29201
For more information, contact Region 4: http://www.epa.gov/region4/water/uic/

South Dakota-1425 (Oil and Gas Related Wells)
Contact: Fred Steece  Email: Fred.Steece@state.sd.us
Phone: 605-394-2329
Agency: South Dakota Department of Env. And Nat Resources
Address: Joe Foss Bldg. 523 East Capitol
Pierre, SD 57501
Web site: http://www.state.sd.us/dnr/DEIS/ground/uic/uic.htm

Tennessee-DI (All Wells)
Contact: Bill Mann  Email: mann.bill@epa.gov
Phone: 404-562-9452  Fax: 404-562-9439
Agency: USEPA R4 - Atlanta Federal Center
Address: GW & UIC Section-61 Forsyth St., SW
Atlanta, GA 30303
Web site: http://www.epa.gov/region4/water/uic/

Texas Class II and III (Oil and Gas Disposal and some)
Contact: Steve Seni  Email: steven.seni@rrc.state.tx.us
Phone: 512-475-4439  Fax: 512-463-6780
Agency: TX Railroad Commission
Address: PO Box 12967
Austin, TX 78711-6780
Web site: http://www.rrc.state.tx.us/
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/uic/index.htm

Texas Class III (Mining wells)
Contact: Dale Kohler  Email: dkohler@rrc.state.tx.us
Phone: 512-239-6636  Fax: 512-239-6626
Agency: TX Commission on Environmental Quality
Address: PO Box 13087
Austin, TX 78711-3087
Web site: http://www.tceq.state.tx.us/index.htm
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/uic/index.htm

Texas-1422 (All but Oil and Gas Related Wells)
Contact: Ben Knape  Email: bknape@tnrrc.state.tx.us
Phone: 512-239-6633  Fax: 512-239-6626
Agency: TX Natural Resources Conservation Commission
Address: PO Box 13087
Austin, TX 78711-3087
Web site: http://www.tceq.state.tx.us/index.htm
For more information, contact Region 6: http://www.epa.gov/region6/water/swp/uic/index.htm

Utah-1422 (All but Oil and Gas Related Wells)
Contact: Candace Cady  Email: ccady@utah.gov
Phone: 801-538-9260  Fax: 801-538-6016
Agency: Utah Department of Environmental Quality, DWQ
Address: 288 North 1460 West (PO Box 144870)
Salt Lake City, UT 84114
Web site: http://waterquality.utah.gov/

Utah-1425 (Oil and Gas Related Wells)
Contact: Gill Hunt  Email: gillhunt@utah.gov
Phone: 801-359-5297  Fax: 801-359-5940
Agency: Utah Department of Natural Resources, DOGAM
Address: 1594 West North Temple, Suite 1210 (PO Box 145801)
Salt Lake City, UT 84114
Web site: http://ogr.utah.gov/default.htm

Vermont-1422 (All Wells)
Contact: Allison Lowry  Email: allison.lowry@anr.state.vt.us
Phone: 802-241-4455  Fax: 802-241-2996
Agency: Vermont Dept. of Environmental Conservation
Address: 105 South Main St.-Old Pantry Building
Waterbury, VT 05677-0403
Web site: http://www.anr.state.vt.us/dec/www/uic.htm

Virgin Islands-DI (All Wells)
Contact: John Kushway  Email: kushway.john@epa.gov
Phone: 212-637-4232  Fax: 212-637-4211
Agency: USEPA R2
Address: Ground Water Compliance Section-290 Broadway
New York, NY 10007-1866
Web site: http://www.epa.gov/Region2/water/gwcmp.htm
For more information, contact Region 2: http://www.epa.gov/region2/glsw/projectapps/uic.htm

Virginia-DI (All Wells)
Contact: Karen Johnson  Email: johnson.karend@epa.gov
Phone: 215-814-5445  Fax: 215-814-2302
Agency: USEPA R3 (SWP32)
Address: SDWA Branch-1650 Arch St.
Philadelphia, PA 19103
Web site: http://www.epa.gov/reqxwpd/drinkingwater/uic/index.htm
APPENDIX C: STATE STORM WATER PERMITS, FORMS & GUIDANCE

LIST OF DOCUMENTS

Disclaimer:
This CD-ROM was prepared for the educational and informational use only of the members of the National Association of Home Builders. It is being provided with the understanding that the author and publisher are not providing legal or other professional advice. The information provided herein is not a substitute for considered professional advice. It is intended to provide a starting point for builders and developers to use in locating and understanding the permit requirements in their state. The information contained herein may be subject to statutory, regulatory or judicial revision. Regulations and permit requirements are subject to change, and builders and developers should consult their permitting authority or legal counsel to ensure that they are complying with current requirements. Often municipalities will have additional storm water requirements for builders and developers, which are not contained in this collection of documents. The National Association of Home Builders expressly disclaims any responsibility for any damages arising from the use, application, or reliance on the information contained herein.

Please Note:
This CD-ROM contains permits, forms and guidance that were completed as of September 2005. For permits, forms and guidance finalized after this period, please visit http://www.nahb.org/stormwaterguide. Also note that permit information is not available for Nebraska, Oregon, South Carolina, Vermont, Washington, and Wisconsin. These states have yet to adopt Phase III permitting requirements and because information is likely to change in the near future, it is recommended that information be accessed directly from the state permitting department or website.

Alabama
- AL BMP & Inspection Report
- AL Example Site Identification Sign
- AL NOI
- AL NOI Instructions
- AL Noncompliance Notification Report Form
- AL NOT
- AL Phase I/II Permit
- AL Qualified Credentialed Inspection Program
- AL Storm Water Handbook
- AL Tier 1 Waters List for Construction Activities

Washington-1422 (All Wells)
Contact Mary Shaleen Harre Email maha461@ecy.wa.gov
Phone 360-407-6143
Agency Washington Department of Ecology-Water Quality Program
Address PO Box 47600
Columbia, WA 98504-7600
For more information, contact Region 10: http://www.ecy.wa.gov/region10/

West Virginia-1422 (All but Oil and Gas Related Wells)
Contact Evelyn Hopkins Email ehopkins@mail.dep.state.wv.us
Phone 304-558-2108
Agency WV Division of Environmental Protection-OWR
Address GW Protection Section-1201 Greenbrier St.
Charleston, WV 25311
Web site http://www.wvdep.org/item.cfm?id=118&ssId=165
For more information, contact Region 3: http://www.wvdep.gov/section3wpd/drinkingwater/uic/index.htm

West Virginia-1425 (Oil and Gas Related Wells)
Contact Michael Lewis Email mlewis@mail.dep.state.wv.us
Phone 304-558-6075 Fax 304-519-0529
Agency WV Division of Environmental Protection-OG
Address 1356 Hanford Street
Charleston, WV 25301
Web site http://www.wvdep.org/item.cfm?id=118&ssId=165
For more information, contact Region 3: http://www.wvdep.gov/section3wpd/drinkingwater/uic/index.htm

Wisconsin-1422 (All Wells)
Contact Rich Roth Email richard.roth@dnr.state.wi.us
Phone 608-266-2436 Fax 608-267-7650
Agency Dept. of Natural Resources
Address P.O. Box 7921
Madison, WI 53707-7921
Web site http://www.dnr.state.wi.us/org/water/dwg/Jui/uwi/UW.html
For more information, contact Region 5: http://www.dnr.state.wi.us/org/water/dwg/Jui/uwi/UW.html

Wyoming-1422 (All but Oil and Gas Related Wells)
Contact Robert Lucht Email blucht@state.wy.us
Phone 307-777-7955 Fax 307-777-5975
Agency Wyoming Department of Environmental Quality-WQO
Address Herschler Bldg-122 West 25th St.
Cheyenne, WY 82002
Web site http://deq.state.wy.us/wqd/index.asp?pageid=56

Wyoming-1425 (Oil and Gas Related Wells)
Contact Janie Nelson Email jnelson2@state.wy.us
Phone 307-234-7147 Fax 307-234-5306
Agency Wyoming Oil and Gas Conservation Commission
Address PO Box 2640
Casper, WY 82602
Web site http://wogcc.state.wy.us
Alaska (EPA Issues Permit)
- AK-EPA Phase II Fact Sheets
- AK-EPA SWPPP and BMP Guidance
- AK-EPA CBP
- AK-EPA CBP Fact Sheet
- AK-EPA Construction Planning Guide
- AK-EPA Construction Rainfall Erosion Waiver Fact Sheet
- AK-EPA Construction Waiver Form

Arizona
- AZ 2004 Impaired Waters List
- AZ Fact Sheet
- AZ NOI and Instructions
- AZ NOT
- AZ Phase II Permit
- AZ Phase II Permit Waiver Form
- AZ SWPPP Checklist
- AZ Unique Waters List

Arkansas
- AR Controlling Storm Water Brochure
- AR Controlling Storm Water Poster
- AR Fact Sheet and Site Size Determination Requirements
- AR NOI Medium & Large Sites
- AR NOT Medium Construction Sites
- AR NOT Medium & Large Sites
- AR Phase II Permit
- AR Small Construction SWPPP Guidance
- AR SWPPP Checklist
- AR Creating a SWPPP (presentation)

California
- CA Separate Regional Permits
  - Santa Ana Region
  - Lake Tahoe Hydrologic Unit Construction Permit
- CA BMP Handbook Order Form
- CA Fact Sheet for Small Construction
- CA Final Report to the State Water Resources Control Board
- CA NOT & Instructions
- CA Phase II Permit, Fact Sheet & NOI
- CA Pollutant Testing Guidance Table
- CA Sampling Guidance Manual
- CA SWPPP Checklist
- CA Toxicity of Common Construction Pollutants

Colorado
- CO Construction General Permit Rationale
- CO Fact Sheet
- CO Inactivation Form
- CO NOI & Instructions
- CO NOT
- CO Permit Fees
- CO Phase II Permit
- CO Phase II Waiver Form
- CO Qualifying Local Programs
- CO Reassignment Form
- CO Transfer Form

Connecticut
- CT Applicant Compliance Form
- CT Certification of Notice Form
- CT Latitude-Longitude Form
- CT Natural Diversity Database Review Form
- CT NOI
- CT NOT
- CT Permit Application Transmittal Form
- CT Phase II Permit
- CT Public Notice Instructions
- CT Quarterly SWPPP Summary and Compliance Form

Delaware
- DE Application for Storm Water Management Plan Approval
- DE Certified Construction Reviewer Form
- DE Conservation Design Manual
- DE Construction Review Policy
- DE Enforcement Policy
- DE Minimum Requirements for Pond Plans
- DE Minimum Requirements for SWM Plans
- DE NOI
- DE NOI Instructions
- DE NOI-Less than 1 Acre
- DE Phase II Permit Regulations
- DE Rainfall Amounts
- DE Sediment & Storm Water Law
- DE Sediment & Storm Water Plan Checklist
- DE Storm Water Newsletter
- DE Storm Water Plan Review Policy
- DE Storm Water Treatment Endorsed by DNREC
District of Columbia (EPA Issues Permits)
- DC-EPA Phase II Fact Sheets
- DC-EPA SWPPP and BMP Guidance
- DC-EPA CGP
- DC-EPA CGP Fact Sheet
- DC-EPA Construction Planning Guide
- DC-EPA Construction Rainfall Erosivity Waiver Fact Sheet
- DC-EPA Construction Waiver Form

Florida
- FL Fact Sheet
- FL NOI
- FL NOT
- FL Phase I & II Permit
- FL SWPPP Example
- FL SWPPP Template
- FL SWPPP Training Presentation

Georgia
- GA Application for 25 Ft Buffer Encroachment
- GA Application for 50 Ft Buffer Encroachment
- GA Application for Trout Stream Buffer Encroachment
- GA Erosion & Sediment Control Manual
- GA Erosion & Sedimentation Control Rule
- GA Fact Sheet
- GA Information Brochure
- GA Local Issuing Authority
- GA NOI - Blanket Secondary Permittee
- GA NOI - Existing Sites Disturbing 1-5 acres
- GA NOI - Primary Permittee
- GA NOI - Secondary Permittee
- GA NOI - Tertiary Permittee
- GA NOT
- GA NOT - Blanket Secondary Permittee
- GA Permit Fee Fact Sheet
- GA Permit Fee Form
- GA Phase I & II Permit - Common Development Projects
- GA Phase I & II Permit - Infrastructure Projects
- GA Phase I & II Permit - Stand Alone Projects

Hawaii
- HI NOI
- HI NOI Instructions
- HI NOT
- HI NOT Instructions
- HI Phase I & II Permit

Idaho (EPA Issues Permits)
- ID-EPA Phase II Fact Sheets
- ID-EPA SWPPP and BMP Guidance
- ID-EPA CGP
- ID-EPA CGP Fact Sheet
- ID-EPA Construction Planning Guide
- ID-EPA Construction Rainfall Erosivity Waiver Fact Sheet
- ID-EPA Construction Waiver Form

Illinois
- IL Incidence of Noncompliance
- IL NOI
- IL NOT
- IL Phase I & II Permit

Indiana
- IN 303d List 2004
- IN Fact Sheet
- IN Newspaper Publication Language
- IN NOI
- IN NOT
- IN NPDES General Permit Rule
- IN Stormwater & Sediment Control Brochure
- IN-Rule 5 Excerpt-Phase I & II Construction

Iowa
- IA Controlling Streambank Erosion Manual
- IA Erosion & Sediment Control Manual
- IA Fact Sheet
- IA NOI
- IA NOI Instructions
- IA NOT
- IA Phase I & II Permit
- IA Public Notice Form
- IA Stormwater Management Guidance
Kansas
- KS Contractor Certification Form
- KS Definitions & Acronyms
- KS Document Certification Form
- KS Erosion Control Fact Sheet
- KS Exceptional Waters
- KS General Permit Packet
- KS Individual Lot Certification
- KS List of General Permit Forms
- KS NOI
- KS NOI Instructions
- KS NOT
- KS Notice of Transfer
- KS Phase I&II Permit
- KS Rainfall Erosivity Waiver
- KS Rainfall Erosivity Waiver Instructions
- KS Rainfall Erosivity Waiver Fact Sheet
- KS Storm Water Fact Sheet
- KS Surface Water Register
- KS Surface Water Register Maps

Kentucky
- KY Erosion & Sediment Control Guide
- KY NOI
- KY NTO
- KY Phase I&II Permit

Louisiana
- LA Phase I NOI
- LA Phase I NOT
- LA Phase I Permit
- LA Phase II NOT
- LA Phase II Permit

Maine
- ME Appealing a Licensing Decision
- ME Citizens Guide to BMPs for CGP
- ME Erosion and Sediment Control BMPs Manual Information
- ME Erosion and Sediment Control Law
- ME Erosion Control Mix for Mulch
- ME Erosion Control Mix for Sediment Barriers
- ME Fact Sheet
- ME NOI
- ME NOI Instructions
- ME NOT
- ME Permit Requirements Overview
- ME Phase I&II Permit
- ME Phase I&II Permit Appendices
- ME Phase I&II Permit Cover

Maryland
- MD Storm Water Design Manual
- MD Erosion & Sediment Control Manual
- MD Green Roof Technology Fact Sheet
- MD Model SW Management Plan for Single Lot Residential
- MD NOI
- MD NOT
- MD Phase I&II Permit
- MD Proprietary Practices Fact Sheet
- MD Storm Water Design Manual Fact Sheet
- MD Storm Water Management Fact Sheet
- MD Urban Redevelopment Fact Sheet

Massachusetts (EPA Issues Permits)
- MA-EPA Phase II Fact Sheets
- MA-EPA SWPPP and BMP Guidance
- MA-EPA CGP
- MA-EPA CGP Fact Sheet
- MA-EPA Construction Planning Guide
- MA-EPA Construction Rainfall Erosivity Waiver Fact Sheet
- MA-EPA Construction Waiver Form
**Michigan**
- MI BMP Guidebook
- MI Construction Certified Operator Training Manual
- MI Erosion Control-Polycrylamides
- MI Fact Sheet
- MI NOT
- MI Permit Fees
- MI Phase I NOI
- MI Phase I & II Permit by Rule
- MI Phase I & II Permit by Rule, Construction Activity Excerpt

**Minnesota**
- MN BMP Manual
- MN Calcareous Fen Sites
- MN Compliance Calendar-2005
- MN Compliance Toolkit-Small Construction
- MN E&SC for Homeowner Fact Sheet
- MN Fact Sheet
- MN Impaired Waters-2004
- MN Inspection Checklist
- MN Inspection Guide
- MN Inspector’s Field Guide
- MN NOI
- MN NOT
- MN Phase I & II Permit
- MN Phase II Fact Sheet
- MN Sample SWPPP
- MN Special Waters Table
- MN Subdivision Form
- MN Subdivision Form Guidance
- MN SWPPP Guidance
- MN Transfer-Modification Form

**Mississippi**
- MS Phase I Forms Package
- MS Phase I Permit
- MS Phase II Memo
- MS Phase II Permit & NOI
- MS SWPPP Guidance

**Missouri**
- MO BMP Manual
- MO Fact Sheet
- MO General Permit Application Form
- MO NOT
- MO Phase I NOI
- MO Phase I & II Permit-City or Co with Program
- MO Phase I & II Permit-City or Co
- MO Phase I & II Permit-Derogated Areas
- MO Phase I & II Permit-Land Disturbing Greater than 1 Acre
- MO Phase II NOI

**Montana**
- MT NOI
- MT NOT
- MT Permit Fees
- MT Phase I & II Permit
- MT Storm Water Requirements for Construction Brochure
- MT SWPPP Form

**Nevada**
- NV BMP Fact Sheet
- NV BMP Handbook
- NV Example Site Map
- NV Example SWPPP
- NV Fact Sheet
- NV FAQs
- NV List of State E&SC Manuals
- NV NOI
- NV NOT
- NV Phase I & II Permit
- NV Rainfall Erosion Waiver Fact Sheet
- NV Waiver Calculation Form

**New Hampshire** (EPA Issues Permits)
- NH-EPA Phase II Fact Sheets
- NH-EPA SWPPP and BMP Guidance
- NH Digging Fact Sheet
- NH-EPA CGP
- NH-EPA CGP Fact Sheet
- NH-EPA Construction Planning Guide
- NH-EPA Construction Rainfall Erosivity Waiver Fact Sheet
- NH-EPA Construction Waiver Form
New Jersey
- NJ BMP Manual
- NJ Fact Sheet
- NJ General Application Form
- NJ NOI
- NJ Permit Summary Sheet
- NJ Phase I&II Permit
- NJ Regulated Discharges
- NJ Self Screening Form
- NJ Technical Manual for Stormwater Permitting
- NJ Transfer Form

New Mexico (EPA issues Permits)
- NM-EPA Phase II Fact Sheets
- NM-EPA SWPPP and BMP Guidance
- NM Phase II Fact Sheet
- NM-EPA CGP
- NM-EPA CGP Fact Sheet
- NM-EPA Construction Planning Guide
- NM-EPA Construction Rainfall Erosivity Waiver Fact Sheet
- NM-EPA Construction Waiver Form

New York
- NY Fact Sheet
- NY Inspection Report
- NY Monthly Summary of Site Inspection Activities
- NY NOI
- NY NOI Instructions
- NY NET
- NY Phase I&II Permit
- NY Quarterly SWPPP Status with Permit Compliance Form
- NY Stormwater Design Manual
- NY Technical Requirements Fact Sheet

North Carolina
- NC Clearing and Grading NOI
- NC Clearing and Grading Permit
- NC Curb Outlet System Supplemental Form
- NC Discharge Monitoring Report
- NC Infiltration Basin Supplemental Form
- NC Inspection Log
- NC Low Density Supplemental Form
- NC Maintaining Wet Detention Pond Fact Sheet
- NC NOI
- NC Off Site Supplemental Form
- NC Permit Fact Sheet
- NC Phase I&II Permit
- NC Single Family Residence NOI
- NC Single Family Residence Permit
- NC Storm Water Fact Sheet for Development
- NC Stormwater BMP Manual
- NC Underground Infiltration Trench Supplemental Form
- NC Wet Detention Basin Supplemental Form

North Dakota
- ND Annual Location Record for Small Construction
- ND Discharge Monitoring
- ND NOI
- ND NOI
- ND Phase I&II Permit
- ND Site Inspection Record
- ND SWPPP Guidance Forms
- ND Transfer Form

Ohio
- OH Co-Permittee NOI
- OH Co-Permittee NOI Instructions
- OH Fact Sheet
- OH Inspection Checklist
- OH NOI
- OH NOI for Individual Lot
- OH NOI for Individual Lot Instructions
- OH NOI Instructions
- OH NOT
- OH NOT for Individual Lot
- OH NOT for Individual Lot Instructions
- OH NOT Instructions
- OH Phase I&II Permit
- OH Rainfall Erosivity Waiver Fact Sheet
- OH SWPPP Checklist
- OH Transfer Form
Oklahoma
- OK NOI
- OK NOT
- OK Phase I&II Permit

Pennsylvania
- PA Erosion & Sediment Control Application
- PA Erosion & Sediment Control Application Instructions
- PA Erosion & Sediment Control Checklist
- PA Erosion & Sediment Control Manual
- PA NOT
- PA Natural Diversity Inventory Form-Computer Screening
- PA Natural Diversity Inventory Form-Environmental Review
- PA NOI
- PA NOI Instructions
- PA Fact Sheet
- PA Permit Application Checklist
- PA Permit Guidelines
- PA Phase I&II Permit
- PA Transfer Co-Permittee Application

Rhode Island
- RI Storm Water Manual
- RI CCP Slideshow
- RI NOI
- RI NOT
- RI Overview Fact Sheet
- RI Permit FAQs
- RI Phase I&II Permit
- RI SWMPP Application Checklist

South Dakota
- SD NOI
- SD NOT
- SD Phase I&II Permit

Tennessee
- TN Erosion & Sediment Control Handbook
- TN Example SWPPP
- TN Example SWPPP-Single Family Residential
- TN Fact Sheet
- TN Inspection Certification
- TN NOI
- TN NOT
- TN Phase I&II Permit

Texas
- TX Construction Site Notice for Low Erosion Potential
- TX Fact Sheet
- TX Phase I NOI
- TX Phase I NOT
- TX Phase I NOT Instructions
- TX Phase I Site Notice
- TX Phase I&II Permit
- TX Phase II Site Notice
- TX Phase II Waiver Form
- TX Phase II Waiver Form Instructions
- TX Rainfall Erosivity Waiver Fact Sheet

Utah
- UT Erosivity Waiver Form
- UT Fact Sheet
- UT Phase I&II Permit, NOI & NOT
- UT SWPPP Template Guidelines

Virginia
- VA Example E&SC Inspection Report
- VA Fee Form
- VA Guidance Documents Order Form
- VA NOI Instructions
- VA NOT Instructions
- VA Nutrient Management Fact Sheet
- VA Permit Checklist
- VA Phase I&II Permit
- VA Polyacrylamide Fact Sheet
APPENDIX D:
EPA Construction General Permit Appendix C -
Endangered Species Act Review Procedures

You must meet at least one of the six criteria in Subpart 1.3.C.6 to be eligible for coverage under this permit. You must follow the procedures in this Appendix to assess the potential effects of storm water discharges and storm water discharge-related activities on listed species and their critical habitat. When evaluating these potential effects, operators must evaluate the entire project area.

For purposes of this Appendix, the term “project area” is inclusive of the term “Action Area.” Action area is defined in 50 CFR §402.2 as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. This includes areas beyond the footprint of the construction area that may be affected by storm water discharges and storm water discharge-related activities. “Project area” is defined in Appendix A.

(Operators who are eligible and able to certify eligibility under Criterion B, C, D, or F of Subpart 1.3.C.6 because of a previously issued ESA section 10 permit, a previously completed ESA section 7 consultation, or because the operator's activities were already addressed in another operator's certification of eligibility may proceed directly to Step Four.)

Step One: Determine if Listed Threatened or Endangered Species are Present On or Near Your Project Area

You must determine, to the best of your knowledge, whether listed species are located on or near your project area. To make this determination, you should:

- Determine if listed species are in your county or township. The local offices of the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and State or Tribal Heritage Centers often maintain lists of federally listed endangered or threatened species on their internet sites. Visit www.epa.gov/npdes/stormwater/cgp to find the appropriate site for your state or check with your local office. In most cases, these lists allow you to determine if there are listed species in your county or township.
- If there are listed species in your county or township, check to see if critical habitat has been designated and if that area overlaps or is near your project area.
- Contact your local FWS, NMFS, or State or Tribal Heritage Center to determine if the listed species could be found on or near your project area and if any critical habitat areas have been designated that overlap or are near your project area. Critical habitat areas may be designated independently of the listed species for your county, so even if there are no listed species in your county or township, you must still contact one of the agencies mentioned above to determine if there are any critical habitat areas on or near your project area.

You can also find critical habitat designations and associated requirements at 50 CFR Parts 17 and 226. http://www.access.gpo.gov
- If there are no listed species in your county or township, no critical habitat areas on or near your project area, or if your local FWS, NMFS, or State or Tribal Heritage Center indicates that listed species are not a concern in your part of the county or township, you may check box A on the Notice of Intent Form.
- If there are listed species and if your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species could exist on or near your project area, you will need to do one or more of the following:
• Conduct visual inspections: This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal storm water collection systems.

• Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive storm water discharges, biological surveys may be an appropriate way to assess whether species are located on or near the project area and whether there are likely adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful in conjunction with Steps Two, Three, or Four of these instructions.

• Conduct an environmental assessment under the National Environmental Policy Act (NEPA). Such reviews may indicate if listed species are in proximity to the project area. Coverage under the CDP does not trigger such a review because the CDP does not regulate new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the Clean Water Act), and is thus statutorily exempted from NEPA. See CWA section 511(c). However, some construction activities might require review under NEPA for other reasons such as federal funding or other federal involvement in the project.

If listed threatened or endangered species or critical habitat are present in the project area, you must look at impacts to species and/or habitat when following Steps Two through Four. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CDP may require measures to protect critical habitat that are separate from those to protect listed species.

Step Two: Determine if the Construction Activity’s Storm Water Discharges or Storm Water Discharge-Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat

To receive CDP coverage, you must assess whether your storm water discharges or storm water discharge-related activities is likely to adversely affect listed threatened or endangered species or designated critical habitat that are present on or near your project area.

Potential adverse effects from storm water discharges and storm water discharge-related activities include:

• Hydrological. Storm water discharges may cause siltation, sedimentation or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of storm water discharged and the volume and condition of the receiving water. Where a storm water discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.

• Habitat. Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of storm water BMPs, may adversely affect listed species or their habitat. Storm water may drain or inundate listed species habitat.

• Toxicity. In some cases, pollutants in storm water may have toxic effects on listed species. The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you must contact the appropriate office of the FWS, NMFS or Natural Heritage Center for assistance. If adverse effects are not likely, then you may check box E on the NOI form and apply for coverage under the CDP. If the discharge may adversely affect listed species or critical habitat, you must follow Step Three.

Step Three: Determine if Measures Can Be Implemented to Avoid Adverse Effects

If you make a preliminary determination that adverse effects are likely to occur, you can still receive coverage under Criterion E of Subpart 1.3.C.6 of the CDP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CDP coverage. These measures may involve relatively simple changes to construction activities such as re-routing a storm water discharge to bypass an area where contact the FWS and/or NMFS to see what appropriate measures might be suitable to avoid or eliminate the initiation of informal consultation with the FWS and/or NMFS (described in more detail in Step Four).

If you adopt measures to avoid or eliminate adverse affects, you must continue to abide by those measures for the duration of the construction project and coverage under the CDP. These measures must be described in the SWPPP and are enforceable CDP conditions and/or conditions for meeting the eligibility criteria in Subpart 1.3.

Step Four: Determine if the Eligibility Requirements of Criterion B, C, D, or F of Subpart 1.3.C.6 Can Be Met

Where adverse effects are likely, you must contact the FWS and/or NMFS. You may still be eligible for CDP coverage if any likely adverse effects can be addressed through meeting Criterion B, C, D, or F of Subpart 1.3.C.6 of the CDP. These criteria are as follows:

1. An ESA Section 7 Consultation is Performed for Your Activity (See Criterion B or C of Subpart 1.3.C.6 of the CDP).

Formal or informal ESA section 7 consultation is performed with the FWS and/or NMFS that addresses the effects of your storm water discharges and storm water discharge-related activities on federally-listed and if any actions are identified that may affect listed species or critical habitat. FWS and/or NMFS may request that consultation take place under this permit, consultation must result in a “no jeopardy opinion” or a written concurrence by the Service(s) on a finding that your storm water discharge(s) and storm water discharge-related activities are not likely to adversely affect listed species or critical habitat. (See 50 CFR §402.415). If you receive a “no jeopardy opinion,” you may continue to work with the FWS and/or NMFS and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.

Most consultations are accomplished through informal consultation. By the terms of this CDP, EPA has automatically designated operators as non-federal representatives for the purpose of conducting informal consultations. See Subpart 1.3.C.6 and 50 CFR §402.08 and §402.13. When conducting informal ESA section 7 consultation as a non-federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify FWS and/or NMFS of your intention and agreement to conduct consultation as a non-federal representative.

Consultation may occur in the context of another federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation). Any terms and conditions of SWPPP as noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA section 7 consultation must be performed with either the FWS, NMFS or both Services depends on the listed species that may be affected by the operator’s activity. In general, NMFS has jurisdiction over marine, estuarine, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

2. An Incidental Taking Permit Under Section 10 of the ESA is Issued for the Operators Activity (See Criterion D of Subpart 1.3.C.6 of the CDP).
Your construction activities are authorized through the issuance of a permit under section 10 of the ESA and that authorization addresses the effects of your storm water discharge(s) and storm water discharge-related activities on federally-listed species and designated critical habitat. You must follow FWS and/or NMFS procedures when applying for an ESA Section 10 permit (see 50 CFR §17.22(b)(1) for FWS and §222.22 for NMFS). Application instructions for section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites (http://www.fws.gov and http://www.nmfs.noaa.gov) or by contacting the appropriate FWS and NMFS regional office.

3. You are Covered Under the Eligibility Certification of Another Operator for the Project Area (See Criterion F of Subpart 1.3.C.6 of the CGP).

Your storm water discharges and storm water discharge-related activities were already addressed in another operator’s certification of eligibility under Criteria A through E of Subpart 1.3.C.6 which also included your project area. For example, a general contractor or developer may have completed and filed an NOI for the entire project area with the necessary Endangered Species Act certifications (criteria A-E), subcontractors may then rely upon that certification and must comply with any conditions resulting from that process. By certifying eligibility under Criterion F of Subpart 1.3.C.6, you agree to comply with any measures or controls upon which the other operator’s certification under Criterion B, C, or D of Subpart 1.3.C.6 was based. Certification under Criterion F of Subpart 1.3.C.6 is discussed in more detail in the Fact Sheet that accompanies this permit.

You must comply with any terms and conditions imposed under the eligibility requirements of Criterion A through F to ensure that your storm water discharges and storm water discharge-related activities are protective of listed species and critical habitat. Such terms and conditions must be incorporated in the project’s SWPPP. If the eligibility requirements of Subpart 1.3.C.6 cannot be met, then you are not eligible for coverage under the CGP. In these instances, you may consider applying to EPA for an individual permit.

APPENDIX E:

Note: The following article originally appeared in the National Association of Home Builders’ Land Development Magazine.

Clean Water Act Inspections; Suggestions on How Developers/BUILDERS Should Handle an Inspector’s Visit
By Thomas Ward

Clean Water Act (CWA) provides the U.S. Environmental Protection Agency (EPA) and delegated states with the authority to require any person who discharges a pollutant into a water of the United States to obtain a permit. These are often referred to as NPDES permits. In addition, Section 308 of the CWA provides EPA personnel or their representatives with the authority to enter premises where an effluent source is located (such as a development site with a stormwater discharge) or where records are located. The only caveat to such entry is that the inspector must first show his or her credentials.

In view of Section 308’s broad reach, developers need to be prepared for a site inspection by the EPA or a delegated state agency. Given that the Clean Water Act does not require the EPA to give notice of an inspection, project owners are well advised to develop an inspection plan. An inspection plan will help ensure that an inspection runs smoothly and reduce the risk of an enforcement action. The following are suggestions on how a developer should handle a site inspection.

Pre-Inspection Phase

A facility should always be prepared for an unannounced inspection. The best way to ensure readiness is to develop an overall inspection strategy. Before an inspector arrives on site you should take the following actions:

1) Identify the personnel who will be responsible for the inspection. One person should serve as the liaison between the development company and the inspector. That individual should be a person the company trusts to represent its interest. The individual should also demonstrate a thorough understanding of the site and construction procedures, as well as full knowledge of applicable environmental laws. The liaison must have acquired effective interpersonal communication skills while still being assertive. If possible, the liaison should be the only person to communicate information directly to the inspector. If the liaison is not always on site, he or she must always be easily reachable by telephone and able to be on site almost immediately.

*Note: suggestions were developed from Quarles & Brady, "What to Do When an Inspector Knocks on Your Door," http://www.quarles.com/wp_content/uploads/2010/10/what_t0_do_when_an_inspector_knocks_on_your_door.pdf*
The liaison might be:
- the job foreman
- the employee responsible for conducting Stormwater Pollution Plan Inspections, or
- the employee who deals with state agencies concerning erosion control or water pollution issues.

2) Develop a compliance plan. Each site should have in place a system that allows employees to internally report possible CWA violations. Such a system allows the company to make corrections before an inspection occurs. Every person on site should be aware of compliance procedures and practices. Key employees familiar with the site, should also be familiar with the Storm Water Control Plan.

3) Develop an inspection plan. Pursuant to Section 308 of the CWA, inspectors have broad authority to request and review documents. A company can position itself for an unannounced inspection by developing an inspection plan that clearly identifies the following:

- the inspection liaison;
- the person responsible for maintaining the inspection plan;
- important telephone numbers, i.e. company officers, attorneys, and consultants; and
- the types and locations of all documents that the company maintains pursuant to the CWA. These may include the Storm Water Pollution Prevention Plan, copies of site inspections, a copy of the permit, etc.

Furthermore, the liaison should have easy and quick access to all site records, including all previous government/self-inspections, and a site map. In addition, company personnel should know:

- how to act towards an inspector;
- what to do if the liaison is not reachable; and
- how to respond if the inspector refuses to provide split samples or duplicates of photographs.

4) Keep good records. The types of documents likely to be requested by an inspector may include permits, inspection logs, equipment/best management practice records, shipping papers, monitoring documents, pollutant release reports, and material safety data sheets. A sound record-keeping system will show the inspector that the company is serious about compliance. In addition, the company can avoid the embarrassing and potentially damaging scenario of explaining to the inspector why a document cannot be located. Accordingly, the company needs to make sure that all required paper work and permits are up to date and organized. Finally, the company representative needs to be certain that legally privileged documents (attorney-client, attorney work product) are not provided to the inspector.

**Inspection Phase**

Inspectors may conduct an inspection at any reasonable time. Any person claiming to be conducting an inspection pursuant to the CWA must show his or her credentials. The inspector should be treated cordially and with respect. In addition, while it may not be advisable to volunteer information that has not been requested, the liaison should fully cooperate with the inspector. The following steps can help ensure that the company protects its interests while still cooperating with the inspector:

1) Do not deny entry to an inspector. The EPA and many other agencies have the authority to conduct an inspection without any notice, as long as the inspection occurs at a reasonable time. In some instances, the denial of entry, can lead to sanctions. If the inspection is undertaken pursuant to a valid search warrant, the inspection generally can occur at any time. If the company denies entry, the inspector will most likely return with a court order granting the right to enter. Thus, the inspector will not only gain entry, but may also conduct the inspection with heightened scrutiny due to a perceived lack of cooperation.

2) Hold an opening conference. If the liaison has not already arranged for an opening conference, he or she should request such a conference before the inspection gets underway. The opening conference allows the company and the government to settle issues raised during any pre-inspection communications with the inspector. Furthermore, the liaison and the inspector(s) should discuss the purpose of the inspection and identify the site's areas the inspector wishes to review. The conference should also address specific inspection details such as the estimated time of the inspection, the taking of photographs, document availability, sampling, employee interviews, logistics, schedules, site rules and safety procedures. An inspector will most likely ask for a description of stormwater control operations and discharge points. The opening conference not only gives the liaison insight into the pending inspection, but it gives the company the opportunity to present a cooperative attitude.

3) Accompany the inspector throughout the inspection. The inspection liaison should accompany the inspector throughout the inspection. Whoever accompanies the inspector should take notes of the inspector's comments, suggestions, questions, and conclusions. The liaison should specifically note any comments or questions regarding stormwater runoff or control.

4) Take split samples. It is entirely appropriate to ask the inspector for duplicates of any samples and copies of any photographs taken during the inspection. It is similarly appropriate to ask the inspector to identify what tests and analyses the samples will undergo. If the inspector refuses to provide you with duplicates, the liaison must be prepared to take photographs and samples for the company's use.

5) Fix problems quickly. If possible, any problems noted by the inspector should be addressed immediately, making sure the "fixes" are in line with the inspector's wishes. A rapid response shows a willingness to comply with environmental laws and reduces the risk of a follow-up inspection.
Post-Inspection Phase

It is essential to get as much information as possible from the inspector before he or she leaves the site. While any information provided by the inspector is preliminary and subject to change, the inspector's initial impressions and conclusions often prove useful later.

After the inspection has taken place, it is advisable that a company do the following:

1) Request a closing conference. A closing conference at the end of the inspection presents a good opportunity to discern the inspector's preliminary thoughts. The liaison should ask the inspector for a preliminary oral report and request a copy of the hand-written inspection report. The liaison should also find out when the final inspection report will be available and how it can be obtained. Finally, it is incumbent upon the liaison to ask the inspector whether any immediate action is necessary and then, if possible, to take such action.

2) Draft a written report. Based on notes taken during the inspection, the liaison should prepare a report summarizing the inspector's comments, questions, and conclusions. The report should include any recommended corrections or noncompliance problems identified by the inspector.

APPENDIX F

Contact Information – US EPA Regional Offices*

<table>
<thead>
<tr>
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<th>EPA Region 2</th>
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<tbody>
<tr>
<td>Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont</td>
<td>New Jersey, New York, Puerto Rico, Virgin Islands</td>
</tr>
<tr>
<td>1 Congress Street, Ste 1100</td>
<td>290 Broadway</td>
</tr>
<tr>
<td>Boston, MA 02114-2023</td>
<td>New York, NY 10007-1866</td>
</tr>
<tr>
<td>Phone: (617) 918-1111</td>
<td>Phone: (212) 637-5000</td>
</tr>
<tr>
<td>Fax: (617) 565-3660</td>
<td>Fax: (212) 677-3526</td>
</tr>
<tr>
<td>Toll Free: (888) 372-7541</td>
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<td>Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee</td>
</tr>
<tr>
<td>1650 Arch Street</td>
<td>Atlanta Federal Center</td>
</tr>
<tr>
<td>Philadelphia, PA 19103-2029</td>
<td>61 Forsyth St, SW</td>
</tr>
<tr>
<td>Phone: (215) 814-5000</td>
<td>Atlanta, GA 30303-3104</td>
</tr>
<tr>
<td>Fax: (215) 814-5103</td>
<td>Phone: (404) 562-9900</td>
</tr>
<tr>
<td>Toll Free: (800) 438-2474</td>
<td>Fax: (404) 562-8174</td>
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<tr>
<td>77 W Jackson Boulevard</td>
<td>1445 Ross Avenue</td>
</tr>
<tr>
<td>Chicago, IL 60604-3307</td>
<td>Dallas, TX 75202-2733</td>
</tr>
<tr>
<td>Phone: (312) 333-2000</td>
<td>Phone: (214) 665-2300</td>
</tr>
<tr>
<td>Fax: (312) 333-4135</td>
<td>Fax: (214) 665-7113</td>
</tr>
<tr>
<td>Toll Free: (800) 621-8431</td>
<td>Toll Free: (800) 887-6663</td>
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<tr>
<td>Iowa, Kansas, Missouri, Nebraska</td>
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</tr>
<tr>
<td>901 N. 5th Street</td>
<td>999 18th Street, Suite 500</td>
</tr>
<tr>
<td>Kansas City, KS 66101</td>
<td>Denver, CO 80202-2466</td>
</tr>
<tr>
<td>Phone: (913) 551-7003</td>
<td>Phone: (303) 312-6312</td>
</tr>
<tr>
<td>Toll Free: (800) 223-0425</td>
<td>Fax: (303) 312-6339</td>
</tr>
<tr>
<td>Toll Free: (866) EPA-WEST</td>
<td>Toll Free: (800) 227-8917</td>
</tr>
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<thead>
<tr>
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<tr>
<td>Arizona, California, Hawaii, Nevada, Guam, Marianas</td>
<td>Alaska, Idaho, Oregon, Washington</td>
</tr>
<tr>
<td>75 Hawthorne Street</td>
<td>1200 South Avenue</td>
</tr>
<tr>
<td>San Francisco, CA 94105</td>
<td>Seattle, WA 98101</td>
</tr>
<tr>
<td>Phone: (415) 947-9000</td>
<td>Phone: (206) 553-1200</td>
</tr>
<tr>
<td>Fax: (415) 947-3583</td>
<td>Fax: (206) 553-0149</td>
</tr>
<tr>
<td>Toll Free: (866) EPA-WEST</td>
<td>Toll Free: (800) 424-4372</td>
</tr>
</tbody>
</table>

*Contact information as of September 30, 2005.
APPENDIX G

ESO Memorandum

August 26, 2003

SUBJECT: Expedited Settlement Offer Program for Storm Water (Construction)

FROM: John Peter Suarez, Assistant Administrator
       Office of Enforcement and Compliance Assurance

TO: Water Management Division Directors
    Regions I - X

Enforcement Division Directors
Regions II, VI, VII

Regional Counsels
Regions I - X

This memorandum transmits the final framework for the Expedited Settlement Offer (ESO) Program for Storm Water. The joint regional and Office of Regulatory Enforcement staff workgroup developed: an ESO scope and procedure document; an inspection check-off sheet; a penalty calculation worksheet and a model ESO settlement agreement (attached) in an effort to have a consistent and uniform program throughout the country. I want to thank Regions I, III, IV, VI, VII, VIII, and X for their active participation in the development of the ESO program for storm water. I also want to acknowledge the efforts of Regions III and VI in performing the field test of the program earlier this spring. This effort could not have been accomplished without the experience, knowledge and expertise of all of the workgroup members. Storm water cases often involve facilities or sites where the cumulative effect of discharges can have significant environmental impact on a watershed. In storm water cases, issuing timely and consistent enforcement actions to compel compliance is necessary to achieve deterrence and insure timely correction of violations. An ESO provides "real time" enforcement in situations where violations can be corrected quickly and a penalty assessed within a short amount of time, generally a few months from EPA's discovery of the violation.

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 order to ensure that the ESO is used appropriately, regions must consider the ESO criteria. 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 in consultation with the regions will evaluate the criteria and the effectiveness of the ESO for storm water and make any changes that may be needed to ensure the continued usefulness of this program.

Regions may use ESOs for storm water upon providing a memorandum to ORE/Water Enforcement Division that they are committed to using the ESO as part of a complete storm water enforcement program that will encompass other administrative penalty cases and judicial referrals as appropriate. In addition, regions must ensure that the ESO for storm water will complement, rather than substitute for other formal Section 402 enforcement. Finally, regions must also state that they will use the ESO as developed and that they will not revise or edit the documents, including the criteria determining which sites are eligible for ESOs, without obtaining prior approval by WED. ORE will review the regional ESOs to maintain the uniformity of the nationally-implemented criteria and penalty schedules. ORE looks forward to working with the regions in exploring meaningful and effective opportunities to use the ESO for storm water. For specific questions, please contact Lauren V. Kabler in the Water Enforcement Division at (202) 564-4052.
APPENDIX H

EXPEDITED SETTLEMENT OFFER ("ESO") FOR STORM WATER (CONSTRUCTION) CRITERIA FOR DETERMINING ESO ELIGIBILITY

Scope
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). 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 EPAs 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.

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.

Regions may use ESOS for storm water upon providing a memorandum to ORE/Water Enforcement Division that they are committed to using the ESO as part of a complete storm water enforcement program that will encompass other administrative penalty cases and judicial referrals as appropriate. In addition, regions must report to the ESO for storm water will complement, rather than substitute for other formal Section 402 enforcement. Finally, regions must also state that they will use the ESO as developed and that they will not revise or edit the documents, including the criteria determining which sites are eligible for ESOS, without obtaining prior approval by WED. ESOS for sites over fifty acres will be considered by WED on a case-by-case basis provided that the ESO is part of a complete storm water enforcement program as detailed in the final framework. The regions must seek WED approval if they wish to use the ESO at sites larger than fifty acres. ORE will review the regional ESOS to maintain the uniformity of the nationally-implemented criteria and penalty schedules. 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.

Terminology

A. The Inspector Worksheet is the NPDES Industrial Storm Water Worksheet for Construction. It is the worksheet that an inspector uses in the field when conducting an inspection - each block cross-references the applicable ESO element(s) allowing an inspector to quickly and easily transfer inspection findings to ESO Worksheet and calculate a proposed penalty.

1 This 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 hearing or a judicial trial. The ESO settlement generally is not intended for use by EPAs, litigants, respondents, or any other entity in an administrative hearing or a trial. Further, whether the Agency decides to use the ESO approach is purely within EPA's discretion.

2 Use of this form is not mandatory - it is merely provided as a tool for the inspector.

B. The ESO Worksheet is the Expedited Settlement Offer Worksheet - Findings and Alleged Violations. It is the worksheet that an inspector uses to calculate a proposed or recommended penalty for the site agreement.

C. The ESO Agreement is the Expedited Stormwater Settlement Agreement. It is a combined "Complaint" and "Consent Agreement and Final Order.

D. The ESO Criteria, as follows, controls which sites are ESO-eligible. Sites which meet all of the following criteria can be ESO-eligible:

1. construction sites up to fifty 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 is no evidence of non-compliance with storm water discharges (e.g., process wastewater discharge, such as tank washing or discharge from a concrete batch plant operation).

Procedure

1. The inspector conducts a storm water inspection using the Inspector Worksheet for Construction.

2. The inspector consults the ESO Criteria to determine whether the site is ESO-eligible.

3. If the inspector determines that the site is ESO-eligible, the inspector transfers the findings to the ESO Worksheet and calculates a proposed penalty.

4. The inspector leaves the ESO Worksheet (proposed penalty) in the field with the site representative; or

4b. The inspector does not leave the ESO Worksheet in the field with the site representative may require that the ESO Worksheet undergo supervisor review and approval before it is delivered to a site representative.

5. A supervisor reviews the Inspector Worksheet and ESO Worksheet and either approves or does not approve the proposed penalty. If the penalty is approved, the ESO Agreement, along with attached inspection.

6. The site representative is given thirty days to return a signed ESO Agreement accompanied by a check. The check shall be deposited in an interest-bearing escrow account. If the site representative returns a signed ESO Agreement and is not prepared to escalate enforcement responses by commencing an administrative enforcement proceeding.

7. The region provides for a thirty day public notice of ESO Agreement. Regions may choose to public notice the ESO Agreement concurrent with the thirty days the violator has to correct the violation and signed by the violator and returned to EPA.
B. Regions are required to consider any public comments received regarding the ESO in order to determine, after reviewing the comments, whether the ESO is in the public interest. If a region determines, after a mandatory ten day period following the close of the comment period, that the ESO is in the public interest, the Appropriate Official at a region (e.g., an approving neutral, like a Regional Judicial Office) will sign the Agreement. Regions will file the signed ESO Agreement with a Hearing Clerk, mail the original back to the site representative and mail a copy to any commenters informing them of their right to file with the Regional Administrator a petition to set aside the ESO pursuant to §309(g)(4)(C) of the Act, 33 U.S.C. §1319(g)(4)(C) and Part 22. The ESO is effective thirty days after signature by the Appropriate Official, unless a petition to set aside the ESO Agreement is filed by a commenter.

### APPENDIX I

#### NPDES Industrial Storm Water Worksheet (Construction)

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#### Facility Location Information

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<td>GPS Coordinates</td>
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#### Contact Information

| Name(s) and Role(s) of All Parties Meeting the Definition of Operator |
| Facility Contact |
| Authorized Official(s) |

#### Site Information: (circle all that apply)

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#### Basic SWPPP Information

| SWPPP Prepared & Available ESO Elements 1 & 33 | Y | N |
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| SWPPP Implementation Satisfactory ESO Elements 22 - 48 | Y | N |
### SWPPP Review (can be completed in office)

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<th>General</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a SWPPP?</td>
<td>Y N</td>
</tr>
<tr>
<td>SWPPP completed prior to NOI submission?</td>
<td>Y N</td>
</tr>
<tr>
<td>Copy of permit language?</td>
<td>Y N</td>
</tr>
<tr>
<td>SWPPP consistent with state/tribal/local regulations and permits?</td>
<td>Y N</td>
</tr>
<tr>
<td>SWPPP updated to incorporate changes to State, Tribal, Local erosion plans?</td>
<td>Y N</td>
</tr>
<tr>
<td>Have copies of inspection reports/all other documentation been retained as part of the SWPPP for 3 years from date permit coverage expires?</td>
<td>Y N</td>
</tr>
<tr>
<td>Is a copy of the SWPPP on site or made available?</td>
<td>Y N</td>
</tr>
<tr>
<td>Did all &quot;operators&quot; sign/certify the SWPPP?</td>
<td>Y N</td>
</tr>
</tbody>
</table>

### Site Description

<table>
<thead>
<tr>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWPPP identifies potential sources of pollution?</td>
</tr>
<tr>
<td>SWPPP identifies all operators and their areas of control?</td>
</tr>
<tr>
<td>Is there a site description?</td>
</tr>
<tr>
<td>Nature/sequence of construction activity?</td>
</tr>
<tr>
<td>Total area of site and total area to be disturbed?</td>
</tr>
<tr>
<td>Is there a general location map?</td>
</tr>
<tr>
<td>Is there a site map?</td>
</tr>
</tbody>
</table>

### Controls to Reduce Pollutants

<table>
<thead>
<tr>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the SWPPP include a description of all pollution control measures (SPMS) that will be implemented to control pollutants in storm water discharges, including sequence and which operator responsible for implementation?</td>
</tr>
<tr>
<td>Does the SWPPP include a description of interim and permanent stabilization strategies (e.g., seeding, mulching, riprap) for the site?</td>
</tr>
</tbody>
</table>
### NPDES Industrial Storm Water Worksheet (Construction)

<table>
<thead>
<tr>
<th>Controls to Reduce Pollutants (cont'd)</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the SWPPP identify the contractor(s) and timing by which stabilization practices will be implemented?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does the SWPPP include a description of structural practices (e.g., vehicle track-out, silt fences, sediment traps, storm drain inlet protection) for the site?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does the SWPPP identify the contractor(s) and timing by which structural practices will be implemented?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does the SWPPP identify storm water management measures to address storm water runoff once the construction is completed (e.g., retention ponds, velocity dissipation controls)?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does SWPPP describe measures to prevent discharge of dredged/waste materials to waters of the U.S.? Does site have 404 permit?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does SWPPP describe measures to minimize off-site vehicle tracking and generation of dust?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does SWPPP describe controls for pollutants from storage of construction or waste materials?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does the SWPPP describe controls for pollutants from non-construction activities?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does SWPPP identify allowable non-storm water discharges?</td>
<td>Y N</td>
</tr>
<tr>
<td>Does SWPPP ensure implementation of pollution prevention measures for non-storm water discharges?</td>
<td>Y N</td>
</tr>
<tr>
<td>Is SWPPP revised when BMPs added/modified within 7 days after inspection reveals problems?</td>
<td>Y N</td>
</tr>
</tbody>
</table>

### Inspections

<table>
<thead>
<tr>
<th>Inspections</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspections performed once every 7 days, or every 14 days within 24 hours of a rain event greater than 0.5?</td>
<td>Y N</td>
</tr>
<tr>
<td>Inspections performed by qualified personnel?</td>
<td>Y N</td>
</tr>
<tr>
<td>All disturbed areas and/or used for storage and exposed to rain inspected?</td>
<td>Y N</td>
</tr>
<tr>
<td>All pollution control measures inspected to ensure proper operation?</td>
<td>Y N</td>
</tr>
<tr>
<td>All discharge locations inspected if accessible, or if not accessible, are nearby downstream locations inspected?</td>
<td>Y N</td>
</tr>
<tr>
<td>Entrance/exit inspected for off-site tracking?</td>
<td>Y N</td>
</tr>
<tr>
<td>Inspection report contain all required items and certified?</td>
<td>Y N</td>
</tr>
</tbody>
</table>

### Notes on SWPPP Review

Site Description:
### Stabilization Practices

List and describe stabilization practices

**ESD Element 43, 44**

- e.g., seeding, mulching, geotextile, sod stabilization

Are stabilization measures initiated no more than 14 days after temporary or permanent construction cessation?

**ESD Element 45**

- e.g., indicate "yes" or "no"; if "yes", how long without stabilization measures?

### Structural Practices

<table>
<thead>
<tr>
<th>List and describe structural controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESD Element 42, 43, 44</td>
</tr>
</tbody>
</table>

- e.g., MfTrics, hay bales, storm drain inlet protection, sedimentation pond, ppmpp, check dam, diversion structure, offshore wetland (trash-out)

### Non-Structural Practices

<table>
<thead>
<tr>
<th>Street Cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESD Element 44</td>
</tr>
</tbody>
</table>

- e.g., describe measures taken to reduce offsite accumulation of sediment

<table>
<thead>
<tr>
<th>Good Housekeeping &amp; Waste Disposal Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESD Element 45</td>
</tr>
</tbody>
</table>

- e.g., describe measures taken to prevent litter and debris from becoming a pollutant source
## NPDES Industrial Storm Water Worksheet (Construction)

### Non-Structural Practices (conf'd)

<table>
<thead>
<tr>
<th>Equipment Wash/ Maintenance Area</th>
<th>ESO Element 43</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(provide brief description)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concrete Washout Areas</th>
<th>ESO Element 43</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(provide brief description)</td>
</tr>
</tbody>
</table>

### Miscellaneous

<table>
<thead>
<tr>
<th>Evidence of Sediment Deposition to Surface Waters</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;ESD Eligibility: &quot;yes,&quot; site not eligible for ESD&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollution prevention measures for non-storm water discharges?</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;ESD Eligibility: if evidence of non allowable non-storm water discharges, site not eligible for ESD&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Has implementation of additional/modified BMPs been completed before next anticipated storm event?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESO Element 43.C.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miscellaneous (conf'd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide brief description</td>
</tr>
</tbody>
</table>

### Notes on SWPPP Implementation
APPENDIX K

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6, 1445 Ross Ave., Suite 1200, Dallas, Texas 75202-2733

FINDINGS OF VIOLATIONS AND ORDER FOR COMPLIANCE

Docket Number: CWA-06- 0303

APPENDIX K

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APPENDIX K
APPENDIX L

EXPEDITED STORM WATER SETTLEMENT INSTRUCTIONS & AGREEMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2753

INSTRUCTIONS

The United States Environmental Protection Agency (EPA) has authority under Section 309 of the Clean Water Act to pursue civil penalties for violations of the storm water regulations. EPA encourages the expedited settlement of certain easily verifiable violations of storm water regulations, such as the violations cited in the Expeditied Settlement Agreement for which these instructions are provided.

You may resolve the cited violations quickly by signing and returning the original Expeditied Settlement Agreement and paying the penalty amount within 30 days of your receipt of the Expeditied Settlement Agreement. If you do not sign and return the Expeditied Settlement Agreement within 30 days of your receipt of the Expeditied Settlement Agreement, EPA will not accept or approve any Expeditied Settlement Agreement returned more than 30 days after the date of your receipt of the settlement agreement.

If you decide not to sign and return the Expeditied Settlement Agreement with payment of the penalty amount within 30 days of your receipt of the Expeditied Settlement Agreement, the Expeditied Settlement Agreement shall be automatically withdrawn, without prejudice to EPA's ability to file an enforcement action for the above or any other violations. Failure to return the Expeditied Settlement Agreement within the prescribed time does not relieve you of the responsibility to comply fully with the regulations, including correcting the violations that have been specifically identified in the Expeditied Settlement Offer Worksheet Findings and Alledged Violation form. If you decide not to sign and return the Expeditied Settlement Agreement and pay the penalty, EPA may pursue more formal enforcement measures to correct the violation(s) and seek penalties of up to a maximum penalty of $27,500 per day per violation.

You are required to sign and return the Expeditied Settlement Agreement to certify that you have corrected the violations and paid the penalty amount. The payment for the penalty amount must be in the form of a bank, cashier's, or certified check payable to the “Treasure, United States of America” with EPA and the Docket Number of the Expeditied Settlement Agreement written on the check. The Docket Number is located at the top of the Expeditied Settlement Agreement.

The original, signed, Expeditied Settlement Agreement and a copy of the check payment of the penalty amount must be sent via CERTIFIED MAIL to the address listed at the top of the Expeditied Settlement Agreement. The original check payment of the penalty amount must be sent to the address listed in the lower left-hand column of the Expeditied Settlement Agreement.

By the terms of the Expeditied Settlement Agreement, you waive your opportunity for a hearing pursuant to Section 309 of the Clean Water Act. EPA will treat any response to the proposed Expeditied Settlement Agreement other than acceptance of the settlement offer, as an indication that the recipient is not interested in pursuing the expeditied settlement procedure.

If you have any questions, you may contact EPA Region 6 at (214) 665-7112.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1445 Ross Ave., Suite 1200, Dallas, Texas 75202-2753

EXPEDITED STORM WATER SETTLEMENT AGREEMENT


IN THE "Respondent" is a "person," within the meaning of § 502(2) of the Act, 33 U.S.C. § 1326(2), and 40 C.F.R. § 122.2.

Attached is a "Findings and Alleged Violations Form" (the "Form"). This person is hereby incorporated by reference. By its signature, Complainant ("EPA") finds that Respondent has committed the violation(s) set forth in the Form.

Respondent had an unauthorized discharge of storm water in violation of Section 301(a) of the Clean Water Act (the "Act") or "CWA"). 33 U.S.C. § 1311, and/or failed to comply with its National Pollutant Discharge Elimination System ("NPDES") storm water permit authorized under Section 402 of the Act, 33 U.S.C. § 1342, as noted on the attached Form.

EPA finds, and Respondent admits, that Respondent is subject to Section 301(a) of the Act, 33 U.S.C. § 1311, and that EPA has jurisdiction over the allegations and any person who "discharges pollutants from a "point source" to "waters of the United States." Respondent neither admits nor denies the allegation(s) specified in the Form.

EPA is authorized to enter into this Consent Agreement and Final Order ("CAFO") under the authority vested in the Administrator of EPA by Section 308(g)(2)(A) of the Act, 33 U.S.C. § 1319(g)(2)(A), and by 40 CFR § 122.2(b).

The parties enter into this CAFO in order to settle the civil violation(s) specified in the Form for a penalty of $5,000. Respondent consents to the assessment of this penalty, and waives the right to contest the allegation(s) specified in the Form, and waives the right to appeal.

Additionally, Respondent certifies, subject to civil and criminal penalties for making a false statement to the United States Government, that it has corrected any deficiencies identified in the Form, and to the best of its knowledge, is in compliance with the NPDES permitting program. Respondent also certifies that it has sent a bank, cashier's, or certified check for the amount specified above, payable to the "Treasure, United States of America" to: U.S. EPA, Region 6, Docket No.: CWA-06-2003 - P.O. Box 360322M, Pittsburgh, PA 15231.

Respondent shall write the docket number of this case on the penalty payment check. This CAFO, along with a photocopy of your check, is, to be returned to the address at the top of this document.

This CAFO settles EPA's civil penalty claims against Respondent for the CWA violations described in the Form. However, EPA does not waive its rights to take any enforcement action against Respondent for any other past, present, or future civil or criminal violations of the Act or any other federal statute or regulation, and does not waive its right to issue a compliance order for the violation(s) described in the Form. EPA has determined that the CAFO to be in the public interest, and Respondent agrees.

David W. Nelles
Branch Chief

Water Enforcement Branch

APPROVED BY RESPONDENT in accordance with 40 CFR § 122.22.

Name (print):

Title (print):

Signature:

Having determined that this CAFO is authorized by law and is in the public interest.

IT IS SO ORDERED:

Richard E. Greene
Regional Administrator

Date:

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NIMB Appendix L

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APPENDIX M

ENVIRONMENTAL PROTECTION AGENCY

[FR 6576-5]

Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations

AGENCY: Environmental Protection Agency (EPA, or Agency).

ACTION: Final Policy Statement.

SUMMARY: EPA today issues its revised final policy on "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations," commonly referred to as the "Audit Policy." The purpose of this Policy is to enhance protection of human health and the environment by encouraging regulated entities to voluntarily discover, promptly disclose and expeditiously correct violations of Federal environmental requirements. Incentives that EPA makes available for those who meet the terms of the Audit Policy include the elimination or substantial reduction of the gravity component of civil penalties and a determination not to recommend criminal prosecution of the disclosing entity. The Policy also restates EPA's longstanding practice of not requesting copies of regulated entities' voluntary audit reports to trigger Federal enforcement investigations.

Today's revised Audit Policy replaces the 1995 Audit Policy (60 FR 66,706), which was issued on December 22, 1995, and took effect on January 22, 1996. Today's revisions maintain the basic structure and terms of the 1995 Audit Policy while clarifying some of its language, broadening its availability, and conforming the provisions of the Policy to actual Agency practice. The revisions being released today lengthen the prompt disclosure period to 21 days, clarify that the independent discovery condition does not automatically preclude penalty mitigation for multi-facility entities, and clarify how the prompt disclosure and repeat violation conditions apply to newly-acquired companies. The revised Policy was developed in close consultation with the U.S. Department of Justice (DOJ), States, public interest groups and the regulated community. The revisions also reflect EPA's experience implementing the Policy over the past five years.

DATES: This revised Policy is effective May 11, 2000.

FOR FURTHER INFORMATION CONTACT: Catherine Malnin Dunn (202)564-2629 or Leslie Jones (202)564-5123. Documentation relating to the development of this Policy is contained in the environmental auditing public docket (64-C-94-01). An index to the docket may be obtained by contacting the Enforcement and Compliance Docket and Information Center (ECDIC) by telephone at (202) 564-2614 or (202)564-2119, by facsimile at (202)501-1011, or by email at docket.eoca@epa.gov. ECDIC office hours are 8:00 AM to 4:00 PM Monday through Friday except for Federal holidays. An index to the docket is available on the Internet at www.epa.gov/oecca/polguid/EnfDock.html. Additional guidance regarding interpretation and application of the Policy is also available on the Internet at www.epa.gov/oecca/ore/apolguid.html.

SUPPLEMENTARY INFORMATION: This Notice is organized as follows:

I. Explanation of Policy
   A. Introduction
   B. Background and History
   C. Purpose
   D. Incentives for Self-Policing
      1. Eliminating Gravity-Based Penalties
      2. 75% Reduction of Gravity-Based Penalties
      3. No Recommendations for Criminal Prosecution
      4. No Routine Requests for Audit Reports
   E. Conditions
      1. Systematic Discovery of the Violation Through an Environmental Audit or a Compliance Management System
      2. Voluntary Discovery
      3. Prompt Disclosure
      4. Discovery and Disclosure Independent of Government or Third-Party Plaintiff
      5. Correction and Remediation
      6. Prevent Recurrence
      7. No Repeat Violations
      8. Other Violations Excluded
      9. Cooperation
   F. Opposition to Audit Privilege and Immunity
   G. Effect on States
   H. Scope of Policy
      I. Implementation of Policy
         1. Civil Violations
         2. Criminal Violations
         3. Release of Information to the Public
   II. Statement of Policy – Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention
      A. Purpose
      B. Definitions
      C. Incentives for Self-Policing
         1. No Gravity-Based Penalties
         2. Reduction of Gravity-Based Penalties by 75%
         3. No Recommendation for Criminal Prosecution
         4. No Routine Request for Environmental Audit Reports
D. Conditions
1. Systematic Discovery
2. Voluntary Discovery
3. Prompt Disclosure
4. Discovery and Disclosure Independent of Government or Third-Party Plaintiff
5. Correction and Remediation
6. Prevent Recurrence
7. No Repeat Violations
8. Other Violations Excluded
9. Cooperation
E. Economic Benefit
F. Effect on State Law, Regulation or Policy
G. Applicability
H. Public Accountability
I. Effective Date

I. Explanation of Policy

A. Introduction

On December 22, 1995, EPA issued its final policy on “Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations” (60 FR 66,706) (Audit Policy, or Policy). The purpose of the Policy is to enhance protection of human health and the environment by encouraging regulated entities to voluntarily discover, disclose, correct and prevent violations of Federal environmental law. Benefits available to entities that make disclosures under the terms of the Policy include reductions in the amount of civil penalties and a determination not to recommend criminal prosecution of disclosing entities.

Today, EPA issues revisions to the 1995 Audit Policy. The revised Policy reflects EPA’s continuing commitment to encouraging voluntary self-policing while preserving fair and effective enforcement. It lengthens the prompt disclosure period to 21 days, clarifies that the independent discovery condition does not automatically preclude Audit Policy credit in the multi-facility context, and clarifies how the prompt disclosure and repeat violations conditions apply in the acquisitions context. The revised final Policy takes effect May 11, 2000.

B. Background and History

The Audit Policy provides incentives for regulated entities to detect, promptly disclose, and expeditiously correct violations of Federal environmental requirements. The Policy contains nine conditions, and entities that meet all of them are eligible for 100% mitigation of any gravity-based penalties that otherwise could be assessed. (“Gravity-based” refers to that portion of the penalty over and above the portion that represents the entity’s economic gain from noncompliance, known as the “economic benefit”.) Regulated entities that do not meet the first condition – systematic discovery of violations – but meet the other eight conditions are eligible for 75% mitigation of any gravity-based civil penalties. On the criminal side, EPA will generally elect not to recommend criminal prosecution by DOJ or any other prosecuting authority for a disclosing entity that meets at least conditions two through nine – regardless of whether it meets the systematic discovery requirement – as long as its self-policing, discovery and disclosure were conducted in good faith and the entity adopts a systematic approach to preventing recurrence of the violation.

The Policy includes important safeguards to deter violations and protect public health and the environment. For example, the Policy requires entities to act to prevent recurrence of violations and to remedy any environmental harm that may have occurred. Repeat violations, those that result in actual harm to the environment, and those that may present an imminent and substantial endangerment are not eligible for relief under this Policy. Companies will not be allowed to gain an economic advantage over their competitors by delaying their investment in compliance. And entities remain criminally liable for violations that result from conscious disregard of or willful blindness to their obligations under the law, and individuals remain liable for their criminal misconduct.

When EPA issued the 1995 Audit Policy, the Agency committed to evaluate the Policy after three years. The Agency initiated this evaluation in the Spring of 1998 and published its preliminary results in the Federal Register on May 17, 1999 (64 FR 28,745). The evaluation consisted of the following components:
- An internal survey of EPA staff who process disclosures and handle enforcement cases under the 1995 Audit Policy;
- A survey of regulated entities that used the 1995 Policy to disclose violations;
- A series of meetings and conference calls with representatives from industry, environmental organizations, and States;
- Focused stakeholder discussions on the Audit Policy at two public conferences co-sponsored by EPA’s Office of Enforcement and Compliance Assurance (OECA) and the Vice President’s National Partnership for Reinventing Government, entitled “Protecting Public Health and the Environment through Innovative Approaches to Compliance”;
- A Federal Register notice on March 2, 1999, soliciting comments on how EPA can further protect and improve public health and the environment through new compliance and enforcement approaches (64 FR 10,144); and
- An analysis of data on Audit Policy usage to date and discussions amongst EPA officials who handle Audit Policy disclosures.

The same May 17, 1999, Federal Register notice that published the evaluation’s preliminary results also proposed revisions to the 1995 Policy and requested public comment. During the 60-day public comment period, the Agency received 29 comment letters, copies of which are available through the Enforcement and Compliance Docket and Information Center. (See contact information at the beginning of this notice.) Analysis of these comment letters together with additional data on Audit Policy usage has constituted the final stage of
the Audit Policy evaluation. EPA has prepared a detailed response to the comments received; a copy of that document will also be available through the Docket and Information Center as well on the Internet at www.epa.gov/oeeca/ore/apolguid.html.

Overall, the Audit Policy evaluation revealed very positive results. The Policy has encouraged voluntary self-policing while preserving fair and effective enforcement. Thus, the revisions issued today do not signal any intention to shift course regarding the Agency's position on self-policing and voluntary disclosures but instead represent an attempt to fine-tune a Policy that is already working well.

Use of the Audit Policy has been widespread. As of October 1, 1999, approximately 670 organizations had disclosed actual or potential violations at more than 2700 facilities. The number of disclosures has increased each of the four years the Policy has been in effect.

Results of the Audit Policy User's Survey revealed very high satisfaction rates among users, with 88% of respondents stating that they would use the Policy again and 84% stating that they would recommend the Policy to clients and/or their counterparts. No respondents stated an unwillingness to use the Policy again or to recommend its use to others.

The Audit Policy and related documents, including Agency interpretive guidance and general interest newsletters, are available on the Internet at www.epa.gov/oeeca/ore/apolguid. Additional guidance for implementing the Policy in the context of criminal violations can be found at www.epa.gov/oeeca/ocpf/audpolo2.html.

In addition to the Audit Policy, the Agency's revised Small Business Compliance Policy ("Small Business Policy") is also available for small entities that employ 100 or fewer individuals. The Small Business Policy provides penalty mitigation, subject to certain conditions, for small businesses that make a good faith effort to comply with environmental requirements by discovering, disclosing and correcting violations. EPA has revised the Small Business Policy at the same time it revised the Audit Policy. The revised Small Business Policy will be available on the Internet at www.epa.gov/oeeca/smbusi.html.

C. Purpose

The revised Policy being announced today is designed to encourage greater compliance with Federal laws and regulations that protect human health and the environment. It promotes a higher standard of self-policing by waiving gravity-based penalties for violations that are promptly disclosed and corrected, and which were discovered systematically— that is, through voluntary audits or compliance management systems. To provide an incentive for entities to disclose and correct violations regardless of how they were detected, the Policy reduces gravity-based penalties by 75% for violations that are voluntarily discovered and promptly disclosed and corrected, even if not discovered systematically.

EPA's enforcement program provides a strong incentive for compliance by imposing stiff sanctions for noncompliance. Enforcement has contributed to the dramatic expansion of environmental auditing as measured in numerous recent surveys. For example, in a 1995 survey by Price Waterhouse LLP, more than 90% of corporate respondents who conduct audits identified one of the reasons for doing so as the desire to find and correct violations before government inspectors discover them. (A copy of the survey is contained in the Docket as document VIII-A-76.)

At the same time, because government resources are limited, universal compliance cannot be achieved without active efforts by the regulated community to police themselves. More than half of the respondents to the same 1995 Price Waterhouse survey said that they would expand environmental auditing in exchange for reduced penalties for violations discovered and corrected. While many companies already audit or have compliance management programs in place, EPA believes that the incentives offered in this Policy will improve the frequency and quality of these self-policing efforts.

D. Incentives for Self-Policing

Section C of the Audit Policy identifies the major incentives that EPA provides to encourage self-policing, self-disclosure, and prompt self-correction. For entities that meet the conditions of the Policy, the available incentives include waiving or reducing gravity-based civil penalties, declining to recommend criminal prosecution for regulated entities that self-policing, and refraining from routine requests for audits. (As noted in Section C of the Policy, EPA has refrained from making routine requests for audit reports since issuance of its 1986 policy on environmental auditing.)

1. Eliminating Gravity-Based Penalties

In general, civil penalties that EPA assesses are comprised of two elements: the economic benefit component and the gravity-based component. The economic benefit component reflects the economic gain derived from a violator's illegal competitive advantage. Gravity-based penalties are that portion of the penalty over and above the economic benefit. They reflect the egregiousness of the violator's behavior and constitute the punitive portion of the penalty. For further discussion of these issues, see "Calculation of the Economic Benefit of Noncompliance in EPA Civil Penalty Enforcement Cases," 64 FR 32,948 (June 18, 1999) and "A Framework for Statute-Specific Approaches to Penalty Assessments," #GM-22 (1984), U.S. EPA General Enforcement Policy Compendium.

Under the Audit Policy, EPA will not seek gravity-based penalties for disclosing entities that meet all nine Policy conditions, including systematic discovery. ("Systematic discovery" means the detection of a potential violation through an environmental audit or a compliance management system that reflects the entity's due diligence in preventing, detecting and correcting violations.) EPA has elected to waive gravity-based penalties for violations discovered systematically, recognizing that environmental auditing and compliance management systems play a critical role in protecting human health and the environment by identifying, correcting and ultimately preventing violations.
However, EPA reserves the right to collect any economic benefit that may have been realized as a result of noncompliance, even where the entity meets all other Policy conditions. Where the Agency determines that the economic benefit is insignificant, the Agency also may waive this component of the penalty.

EPA's decision to retain its discretion to recover economic benefit is based on two reasons. First, facing the risk that the Agency will recoup economic benefit provides an incentive for regulated entities to comply on time. Taxpayers whose payments are late expect to pay interest or a penalty; the same principle should apply to corporations and other regulated entities that have delayed their investment in compliance. Second, collecting economic benefit is fair because it protects law-abiding companies from being undercut by their noncomplying competitors, thereby preserving a level playing field.

2. 75% Reduction of Gravity-based Penalties

Gravity-based penalties will be reduced by 75% where the disclosing entity does not detect the violation through systematic discovery but otherwise meets all other Policy conditions. The Policy appropriately limits the complete waiver of gravity-based civil penalties to companies that conduct environmental auditing or have in place a compliance management system. However, to encourage disclosure and correction of violations even in the absence of systematic discovery, EPA will reduce gravity-based penalties by 75% for entities that meet conditions D(2) through D(9) of the Policy. EPA expects that a disclosure under this provision will encourage the entity to work with the Agency to resolve environmental problems and begin to develop an effective auditing program or compliance management system.

3. No Recommendations for Criminal Prosecution

In accordance with EPA's Investigative Discretion Memo dated January 12, 1994, EPA generally does not focus its criminal enforcement resources on entities that voluntarily discover, promptly disclose and expeditiously correct violations, unless there is potentially culpable behavior that merits criminal investigation. When a disclosure that meets the terms and conditions of this Policy results in a criminal investigation, EPA generally will not recommend criminal prosecution for the disclosing entity, although the Agency may recommend prosecution for culpable individuals and other entities. The 1994 Investigative Discretion Memo is available on the Internet at http://www.epa.gov/oeca/one/aed/comp/comp/compa11.html.

The "no recommendation for criminal prosecution" incentive is available for entities that meet conditions D(2) through D(9) of the Policy. Condition D(1) – systematic discovery – is not required to be eligible for this incentive, although the entity must be acting in good faith and must adopt a to preventing recurring violations. Important limitations to the incentive apply. It will not be available, for example, where corporate officials are consciously involved in or willfully blind to violations, or conceal or condone noncompliance. Since the regulated entity must satisfy conditions D(2) through D(9) of the Policy, violations that cause serious harm or which may pose imminent and substantial endangerment to human health or the environment are not eligible. Finally, EPA reserves the right to recommend prosecution for the criminal conduct of any culpable individual or subsidiary organization.

While EPA may decide not to recommend criminal prosecution for disclosing entities, ultimate prosecutorial discretion resides with the U.S. Department of Justice, which will be guided by its own policy on voluntary disclosures ("Factors in Decisions on Criminal Prosecutions for Environmental Violations in the Context of Significant Voluntary Compliance or Disclosure Efforts by the Violator," July 1, 1991) and by its 1999 Guidance on Federal Prosecutions of Corporations. In addition, where a disclosing entity has met the conditions for avoiding a recommendation for criminal prosecution under this Policy, it will also be eligible for either 75% or 100% mitigation of gravity-based civil penalties, depending on whether the systematic discovery condition was met.

4. No Routine Requests for Audit Reports

EPA reaffirms its Policy, in effect since 1986, to refrain from routine requests for audit reports. That is, EPA has not and will not routinely request copies of audit reports to trigger enforcement investigations. Implementation of the 1995 Policy has produced no evidence that the Agency has deviated, or should devote, from this Policy.

In general, an audit that results in expeditious correction will reduce liability, not expand it. However, if the Agency has independent evidence of a violation, it may seek the information it needs to establish the extent and nature of the violation and the degree of culpability. For discussion of the circumstances in which EPA might request an audit report to determine Policy eligibility, see the explanatory text on cooperation, section I.E.9.

5. Conditions

Section D describes the nine conditions that a regulated entity must meet in order for the Agency to decline to seek (or to reduce) gravity-based penalties under the Policy. As explained in section D.1 above, regulated entities that meet all nine conditions will not face gravity-based civil penalties. If the regulated entity meets all of the conditions except for D(1) – systematic discovery – EPA will reduce gravity-based penalties by 75%. In general, EPA will not recommend criminal prosecution for disclosing entities that meet at least conditions D(2) through D(9).

6. Systematic Discovery of the Violation Through an Environmental Audit or Compliance Management System

Under Section D(1), the violation must have been discovered through either (a) an environmental audit, or (b) a compliance management system that reflects due diligence in preventing, detecting and correcting violations. Both "environmental audit" and "compliance management system" are defined in Section B of the Policy.
The revised Policy uses the term "compliance management system" instead of "due diligence," which was used in the 1995 Policy. This change in nomenclature is intended solely to conform the Policy language to terminology more commonly in use by industry and by regulators to refer to a systematic management plan of systematic efforts to achieve and maintain compliance. No substantive difference is intended by substituting this term "compliance management system" for "due diligence," as the Policy clearly indicates that the compliance management system must reflect the regulated entity's due diligence in preventing, detecting and correcting violations.

Compliance management programs that train and motivate employees to prevent, detect and correct violations on a daily basis are a valuable complement to periodic auditing. Where the violation is discovered through a compliance management system and not through an audit, the disclosing entity should be prepared to document how its program reflects the due diligence criteria defined in Section 8 of the Policy statement. These criteria, which are adapted from existing codes of practice -- such as Chapter Eight of the U.S. Sentencing Guidelines for organizational defendants, effective since 1991 -- are flexible enough to accommodate different types and sizes of businesses and other regulated entities.

The Agency recognizes that a variety of compliance management programs are feasible, and it will determine whether basic due diligence criteria have been met in deciding whether to grant Audit Policy credit.

As a condition of penalty mitigation, EPA may require that a description of the regulated entity's compliance management system be made publicly available. The Agency believes that the availability of such information will allow the public to judge the adequacy of compliance management systems, lead to enhanced compliance, and foster greater public trust in the integrity of compliance management systems.

2. Voluntary Discovery

Under Section D(2), the violation must have been identified voluntarily, and not through a monitoring, sampling, or auditing procedure that is required by statute, regulation, permit, judicial or administrative order, or agreement. The Policy provides three specific examples of discovery that would not be voluntary, and therefore would not be eligible for penalty mitigation; emissions violations detected through a required continuous emissions monitor, violations of NPDES discharge limits found through prescribed monitoring, and violations discovered through a compliance audit required to be performed by the terms of a consent order or settlement agreement. The exclusion does not apply to violations that are discovered pursuant to audits that are conducted as part of a comprehensive environmental management system (EMS) required under a settlement agreement. In general, EPA supports the implementation of EMSs that promote compliance, prevent pollution and improve overall environmental performance. Precluding the availability of the Audit Policy for discoveries made through a comprehensive EMS that has been implemented pursuant to a settlement agreement might discourage entities from agreeing to implement such a system.

In some instances, certain Clean Air Act violations discovered, disclosed and corrected by a company prior to issuance of a Title V permit are eligible for penalty mitigation under the Policy. For further guidance in this area, see "Reduced Penalties for Disclosures of Certain Clean Air Act Violations," Memorandum from Eric Schaeffer, Director of the EPA Office of Regulatory Enforcement, dated September 30, 1999. This document is available on the Internet at www.epa.gov/oeca/ore/apolguid.html.

The voluntary requirement applies to discovery only, not reporting. That is, any violation that is voluntarily discovered is generally eligible for Audit Policy credit, regardless of whether reporting of the violation was required after it was found.

3. Prompt Disclosure

Section D(3) requires that the entity disclose the violation in writing to EPA within 21 calendar days after discovery. If the 21st day after discovery falls on a weekend or Federal holiday, the disclosure period will be extended to the first business day following the 21st day after discovery. If a statute or regulation requires the entity to report the violation in fewer than 21 days, disclosure must be made within the time limit established by law. For example, unpermitted releases of hazardous substances must be reported immediately under 42 U.S.C. § 9603(f). Disclosures under this Policy should be made to the appropriate EPA Regional office or, where multiple Regions are involved, to EPA Headquarters. The Agency will work closely with States as needed to ensure fair and efficient implementation of the Policy. For additional guidance on making disclosures, contact the Audit Policy National Coordinator at EPA Headquarters at 202-564-5123.

The 21-day disclosure period begins when the entity discovers that a violation has, or may have, occurred. The trigger for discovery is when any officer, director, employee or agent of the facility has an objectively reasonable basis for believing that a violation has, or may have, occurred. The "objectively reasonable basis" standard is measured against what a prudent person, having the same information as was available to the individual in question, would have believed. It is not measured against what the individual in question thought was reasonable at the time the situation was encountered. If an entity has some doubt as to the existence of a violation, the recommended course is for the entity to proceed with the disclosure and allow the regulatory authorities to make a definitive determination. Contract personnel who provide on-site services at the facility may be treated as employees or agents for purposes of the Policy.

In the 21-day period has not yet expired and an entity suspects that it will be unable to meet the deadline, the entity should contact the appropriate EPA office in advance to develop disclosure terms acceptable to EPA. For situations in which the 21-day period has already expired, the Agency may accept a late disclosure in the exceptional case, such as where there are complex circumstances, including where EPA determines the violation could not be identified and disclosed within 21 calendar days after discovery.
EPA also may extend the disclosure period when multiple facilities or acquisitions are involved. In the multi-facility context, EPA will ordinarily extend the 21-day period to allow reasonable time for completion and review of multi-facility audits where: (a) EPA and the entity agree on the timing and scope of the audits prior to their commencement; and (b) the facilities to be audited are identified in advance. In the acquisitions context, EPA will consider extending the prompt disclosure period on a case-by-case basis. The 21-day disclosure period will begin on the date of discovery by the acquiring entity, but in no case will the period begin earlier than the date of acquisition.

In summary, Section D(3) recognizes that it is critical for EPA to receive timely reporting of violations in order to have clear notice of the violations and the opportunity to respond if necessary. Prompt disclosure is also evidence of the regulated entity’s good faith in wanting to achieve or return to compliance as soon as possible. The integrity of Federal environmental law depends upon timely and accurate reporting. The public relies on timely and accurate reports from the regulated community, not only to measure compliance but to evaluate health or environmental risk and gauge progress in reducing pollutant loadings. EPA expects the Policy to encourage the kind of vigorous self-policing that will serve these objectives and does not intend that it justify delayed reporting. When violations of reporting requirements are voluntarily discovered, they must be promptly reported. When a failure to report results in imminent and substantial endangerment or serious harm to the environment, Audit Policy credit is predicated under condition D(8).

4. Discovery and Disclosure Independent of Government or Third Party Plaintiff

Under Section D(4), the entity must discover the violation independently. That is, the violation must be discovered and identified before EPA or another government agency likely would have identified the problem either through its own investigative work or from information received through a third party. This condition requires regulated entities to take the initiative to find violations on their own and disclose them promptly instead of waiting for an indication of a pending enforcement action or third-party complaint.

Section D(4)(a) lists the circumstances under which discovery and disclosure will not be considered independent. For example, a disclosure will not be independent where EPA is already investigating the facility in question. However, under subsection (a), where the entity does not know that EPA has commenced a civil investigation and proceeds in good faith to make a disclosure under the Audit Policy, EPA may, in its discretion, provide penalty mitigation under the Audit Policy. The subsection (a) exception applies only to civil investigations; it does not apply in the criminal context. Other examples of situations in which a discovery is not considered independent are where a citizen’s group has provided notice of a violation to a government authority or where discovery of the violation by the government was imminent. Condition D(4)(c) covers the filing of a complaint by a third party. This covers formal judicial and administrative complaints as well as informal complaints, such as a letter from a citizen’s group alerting EPA to a potential environmental violation.

Regulated entities that own or operate multiple facilities are subject to section D(4)(b) in addition to D(4)(a). EPA encourages multi-facility auditing and does not intend for the “independent discovery” condition to preclude availability of the Audit Policy when multiple facilities are involved. Thus, if a regulated entity owns or operates multiple facilities, the facts that one of its facilities is the subject of an investigation, inspection, information request or third-party complaint does not automatically preclude the Agency from granting Audit Policy credit for disclosures of violations self-discovered at the other facilities, assuming all other Audit Policy conditions are met. However, just as in the single-facility context, where a facility is already the subject of a government investigation, inspection or information request (including a broad information request that covers multiple facilities), it will generally not be eligible for Audit Policy credit. The Audit Policy is designed to encourage regulated entities to disclose violations before any of their facilities are under investigation, not after EPA discovers violations at one facility. Nevertheless, the Agency retains its discretion under the Audit Policy to grant penalty waivers or reductions for good-faith disclosures made in the multi-facility context. EPA has worked closely with a number of entities that have received Audit Policy credit for multi-facility disclosures, and entities contemplating multi-facility auditing are encouraged to contact the Agency with any questions concerning Audit Policy availability.

5. Correction and Remediation

Under Section D(5), the entity must remedy any harm caused by the violation and expeditiously certify in writing to appropriate Federal, State, and local authorities that it has corrected the violation. Correction and remediation in this context include responding to spills and carrying out any removal or remedial actions required by law. The certification requirement enables EPA to ensure that the regulated entity will be publicly accountable for its commitments through binding written agreements, orders or consent decrees where necessary.

Under the Policy, the entity must correct the violation within 60 calendar days from the date of discovery, or as expeditiously as possible. EPA recognizes that some violations can and should be corrected immediately, while others may take longer than 60 days to correct. For example, more time may be required if capital expenditures are involved or if technological issues are a factor. If more than 60 days will be required, the disclosing entity must notify the Agency in writing prior to the conclusion of the 60-day period. In all cases, the regulated entity will be expected to do its utmost to achieve or return to compliance as expeditiously as possible.

Correction of the violation depends upon issuance of a permit that has been applied for but not issued by Federal or State authorities, the Agency will, where appropriate, make reasonable efforts to secure timely review of the permit.
6. Prevent Recurrence

Under Section D(6), the regulated entity must agree to take steps to prevent a recurrence of the violation after it has been disclosed. Preventive steps may include, but are not limited to, improvements to the entity's environmental auditing efforts or compliance management system.

2. No Repeat Violations

Condition D(7) bars repeat offenders from receiving Audit Policy credit. Under the repeat violations exclusion, the same or a closely-related violation must not have occurred at the same facility within the past 3 years. The 3-year period begins to run when the government or a third party has given the violator notice of a specific violation, without regard to when the original violation cited in the notice actually occurred. Examples of notice include a complaint, consent order, notice of violation, receipt of an inspection report, citizen suit, or receipt of penalty mitigation through a compliance assistance or incentive project.

When the facility is part of a multi-facility organization, Audit Policy relief is not available if the same or a closely-related violation occurred as part of a pattern of violations at one or more of these facilities within the past 5 years. If a facility has been newly acquired, the existence of a violation prior to acquisition does not trigger the repeat violations exclusion.

The term "violation" includes any violation subject to a Federal, State or local civil judicial or administrative order, consent agreement, conviction or plea agreement. Recognizing that minor violations sometimes are settled without a formal action in court, the term also covers any act or omission for which the regulated entity has received a penalty reduction in the past. This condition covers situations in which the regulated entity has had clear notice of its noncompliance and an opportunity to correct the problem.

The repeat violation exclusion benefits both the public and law-abiding entities by ensuring that penalties are not waived for those entities that have previously been notified of violations and fail to prevent repeat violations. The 3-year and 5-year "bright lines" in the exclusion are designed to provide regulated entities with clear notice about when the Policy will be available.

8. Other Violations Excluded

Section D(8) provides that Policy benefits are not available for certain types of violations. Subsection D(8)(a) excludes violations that result in serious actual harm to the environment or which may have presented an imminent and substantial endangerment to public health or the environment. When events of such a consequential nature occur, violators are ineligible for penalty relief and other incentives under the Audit Policy. However, this condition does not bar an entity from qualifying for Audit Policy relief solely because the violation involves release of a pollutant to the environment, as such releases do not necessarily result in serious actual harm or an imminent and substantial endangerment. To date, EPA has not invoked the serious actual harm or the imminent and substantial endangerment clauses to deny Audit Policy credit for any disclosure.

Subsection D(8)(b) excludes violations of the specific terms of any order, consent agreement, or plea agreement. Once a consent agreement has been negotiated, there is little incentive to comply if there are no sanctions for violating its specific requirements. The exclusion in this section also applies to violations of the terms of any response, removal or remedial action covered by a written agreement.

9. Cooperation

Under Section D(9), the regulated entity must cooperate as required by EPA and provide the Agency with the information it needs to determine Policy applicability. The entity must not hide, destroy or tamper with possible evidence following discovery of potential environmental violations. In order for the Agency to apply the Policy fairly, it must have sufficient information to determine whether its conditions are satisfied in each individual case. In general, EPA requests audit reports to determine the applicability of this Policy only where the information contained in the audit report is not readily available elsewhere and where EPA decides that the information is necessary to determine whether the terms and conditions of the Policy have been met. In the rare instance where an EPA Regional office seeks to obtain an audit report because it is otherwise unable to determine whether Policy conditions have been met, the Regional office will notify the Office of Regulatory Enforcement at EPA headquarters.

Entities that disclose potential criminal violations may expect a more thorough review by the Agency. In criminal cases, entities will be expected to provide, at a minimum, the following: access to all requested documents; access to all employees of the disclosing entity; assistance in investigating the violation, any noncompliance problems related to the disclosure, and any environmental consequences related to the violations; access to all information relevant to the violations disclosed, including that portion of the environmental audit report or documentation from the compliance management system that revealed the violation; and access to the individuals who conducted the audit or review.

7. Opposition to Audit Privilege and Immunity

The Agency believes that the Audit Policy provides effective incentives for self-policing without impairing law enforcement, putting the environment at risk or hindering environmental compliance information from the public. Although EPA encourages environmental auditing, it must do so without compromising the integrity and enforceability of environmental laws. It is important to distinguish between EPA's Audit Policy and the audit privilege and immunity laws that exist in some States. The Agency remains firmly opposed to statutory and regulatory audit privileges and immunity. Privilege laws shield evidence of wrongdoing and prevent States from investigating even the most serious environmental violations. Immunity laws prevent States from obtaining penalties that are appropriate to the seriousness of the violation, as they are required to do under Federal law.
Audit privilege and immunity laws are unnecessary, undermine law enforcement, impair protection of human health and the environment, and interfere with the public's right to know of potential and existing environmental hazards.

Statutory audit privilege and immunity run counter to encouraging the kind of openness that builds trust between regulators, the regulated community and the public. For example, privileged information on compliance contained in an audit report may include information on the cause of violations, the extent of environmental harm, and what is necessary to correct the violations and prevent their recurrence. Privileged information is unavailable to law enforcers and to members of the public who have suffered harm as a result of environmental violations. The Agency opposes statutory immunity because it diminishes law enforcement's ability to discourage wrongful behavior and interferes with a regulator's ability to punish individuals who disregard the law and place others in danger. The Agency believes that its Audit Policy provides adequate incentives for self-policing but without secrecy and without abdicating its discretion to act in cases of serious environmental violations.

Privilege, by definition, invites secrecy, instead of the openness needed to build public trust in industry's ability to self-police. American law reflects the high value that the public places on fair access to the facts. The Supreme Court, for example, has said of privileges that, "[w]hatever their origins, these exceptions to the demand for every man's evidence are not lightly created nor expansively construed, for they are in derogation of the search for truth." United States v. Nixon, 418 U.S. 683, 710 (1974). Federal courts have unanimously refused to recognize a privilege for environmental audits in the context of government investigations. See, e.g., United States v. Dexter Corp., 132 F.R.D. 8, 10 (D.Conn. 1990) (application of a privilege "would effectively impede [EPKs]' ability to enforce the Clean Water Act, and would be contrary to stated public policy.") Cf. In re Grand Jury Proceedings, 861 F. Supp. 386 (D. Md. 1994) (company must comply with a subpoena under Food, Drug and Cosmetics Act for self-evaluative documents).

G. Effect on States

The revised final Policy reflects EPA's desire to provide fair and effective incentives for self-policing that have practical value to States. To that end, the Agency has consulted closely with State officials in developing this Policy. As a result, EPA believes its revised final Policy is grounded in commonsense principles that should prove useful in the development and implementation of State programs and policies.

EPA recognizes that States are partners in implementing the enforcement and compliance assurance program. When consistent with EPA's policies on protecting confidential and sensitive information, the Agency will share with State agencies information on disclosures of violations of Federally-authorized, approved or delegated programs. In addition, for States that have adopted their own audit policies in Federally-authorized, approved or delegated programs, EPA will generally defer to State penalty mitigation for self-disclosures as long as the State policy meets minimum requirements for Federal delegation. Whenever a State provides a penalty waiver or mitigation for a violation of a requirement contained in a Federally-authorized, approved or delegated program to an entity that discloses those violations in conformity with a State audit policy, the State should notify the EPA Region in which it is located. This notification will ensure that Federal and State enforcement responses are coordinated properly.


As always, States are encouraged to experiment with different approaches to assuring compliance as long as such approaches do not jeopardize public health or the environment, or make it profitable not to comply with federal environmental requirements. The Agency remains opposed to State legislation that does not include these basic protections, and reserves its right to bring independent action against regulated entities for violations of Federal law that threaten human health or the environment, reflect criminal conduct or repeated non-compliance, or allow one company to profit at the expense of its law-abiding competitors.

H. Scope of Policy

EPA has developed this Policy to guide settlement actions. It is the Agency's practice to make public all compliance agreements reached under this Policy in order to provide the regulated community with fair notice of decisions and to provide affected communities and the public with information regarding Agency action. Some in the regulated community have suggested that the Agency should convert the Policy into a regulation because they feel doing so would ensure greater consistency and predictability. Following its three-year evaluation of the Policy, however, the Agency believes that there is ample evidence that the Policy has worked well and that there is no need for a formal rulemaking. Furthermore, as the Agency seeks to respond to lessons learned from its increasing experience handling self-disclosures, a policy is much easier to amend than a regulation. Nothing in today's release of the revised final Policy is intended to change the status of the Policy as guidance.

I. Implementation of Policy

1. Civil Violations

Pursuant to the Audit Policy, disclosures of civil environmental violations should be made to the EPA Region in which the entity or facility is located or, where the violations to be disclosed involve more than one EPA Region, to EPA Headquarters. The Regional or Headquarters offices decide whether application of the Audit Policy in a specific case is appropriate. Obviously, once a matter has been referred for civil judicial prosecution, DOJ becomes involved as well. Where there is evidence of a potential criminal violation, the civil offices coordinate with criminal enforcement offices at EPA and DOJ.

NAHB Appendix M
To resolve issues of national significance and ensure that the Policy is applied fairly and consistently across EPA Regions and at Headquarters, the Agency in 1995 created the Audit Policy Quick Response Team (QRT). The QRT is comprised of representatives from the Regions, Headquarters, and DOI. It meets on a regular basis to address issues of interpretation and to coordinate self-disclosure initiatives. In addition, in 1999 EPA established a National Coordinator position to handle Audit Policy issues and implementation. The National Coordinator chairs the QRT and, along with the Regional Audit Policy coordinators, serves as a point of contact on Audit Policy issues in the civil context.

2. Criminal Violations

Criminal disclosures are handled by the Voluntary Disclosure Board (VDB), which was established by EPA in 1997. The VDB ensures consistent application of the Audit Policy in the criminal context by centralizing Policy interpretation and application within the Agency.

Disclosures of potential criminal violations may be made directly to the VDB, to an EPA regional criminal investigation division or to DOI. In all cases, the VDB coordinates with the investigative team and the appropriate prosecuting authority. During the course of the investigation, the VDB routinely monitors the progress of the investigation as necessary to ensure that sufficient facts have been established to determine whether to recommend that relief under the Policy be granted.

At the conclusion of the criminal investigation, the Board makes a recommendation to the Director of EPA’s Office of Criminal Enforcement, Forensics, and Training, who serves as the Deciding Official. Upon receiving the Board’s recommendation, the Deciding Official makes his or her final NAHB recommendation to the appropriate United States Attorney’s Office and/or DOI. The recommendation of the Deciding Official, however, is only that — a recommendation. The United States Attorney’s Office and/or DOI retain full authority to exercise prosecutorial discretion.

3. Release of Information to the Public

Upon formal settlement, EPA places copies of settlements in the Audit Policy Docket. EPA also makes other documents related to self-disclosures publicly available, unless the disclosing entity claims them as Confidential Business Information (and that claim is validated by U.S. EPA), unless another exemption under the Freedom of Information Act is asserted and/or applies, or the Privacy Act or any other law would preclude such release. Presumptively releasable documents include compliance agreements reached under the Policy (see Section H) and descriptions of compliance management systems submitted under Section D(1). Any material claimed to be Confidential Business Information will be treated in accordance with EPA regulations at 40 CFR. Part 2. In determining what documents to release, EPA is guided by the Memorandum from Assistant Administrator Steven A. Herman entitled “Confidentiality of Information Received Under Agency’s Self-Disclosure Policy,” available on the Internet at www.epa.gov/oeca/sahmemol.html.

II. Statement of Policy – Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations

A. Purpose

This Policy is designed to enhance protection of human health and the environment by encouraging regulated entities to voluntarily discover, disclose, correct and prevent violations of Federal environmental requirements.

B. Definitions

For purposes of this Policy, the following definitions apply:

“Environmental Audit” is a systematic, documented, periodic and objective review by regulated entities of facility operations and practices related to meeting environmental requirements.

“Compliance Management System” encompasses the regulated entity’s documented systematic efforts, appropriate to the size and nature of its business, to prevent, detect and correct violations through all of the following:

(a) Compliance policies, standards and procedures that identify how employees and agents are to meet the requirements of laws, regulations, permits, enforceable agreements and other sources of authority for environmental requirements;

(b) Assignment of overall responsibility for overseeing compliance with policies, standards, and procedures, and assignment of specific responsibility for assuring compliance at each facility or operation;

(c) Mechanisms for systematically assuring that compliance policies, standards and procedures are being carried out, including monitoring and auditing systems reasonably designed to detect and correct violations, periodic evaluation of the overall performance of the compliance management system, and a means for employees or agents to report violations of environmental requirements without fear of retaliation;

(d) Efforts to communicate effectively the regulated entity’s standards and procedures to all employees and other agents;

(e) Appropriate incentives to managers and employees to perform in accordance with the compliance policies, standards and procedures, including consistent enforcement through appropriate disciplinary mechanisms; and

(f) Procedures for the prompt and appropriate correction of any violations, and any necessary modifications to the regulated entity’s compliance management system to prevent future violations.
“Environmental audit report” means the documented analysis, conclusions, and recommendations resulting from an environmental audit, but does not include data obtained in, or testimonial evidence concerning, the environmental audit.

“Gravity-based penalties” are that portion of a penalty over and above the economic benefit, i.e., the punitive portion of the penalty, rather than that portion representing a defendant’s economic gain from noncompliance.

“Regulated entity” means any entity, including a Federal, State or municipal agency or facility, regulated under Federal environmental laws.

C. Incentives for Self-Policing

1. No Gravity-Based Penalties

If a regulated entity establishes that it satisfies all of the conditions of Section D of this Policy, EPA will not seek gravity-based penalties for violations of Federal environmental requirements discovered and disclosed by the entity.

2. Reduction of Gravity-Based Penalties by 75%

If a regulated entity establishes that it satisfies all of the conditions of Section D of this Policy except for D(1) - systematic discovery – EPA will reduce by 75% gravity-based penalties for violations of Federal environmental requirements discovered and disclosed by the entity.

3. No Recommendation for Criminal Prosecution

(a) if a regulated entity establishes that it satisfies at least conditions D(2) through D(9) of this Policy, EPA will not recommend to the U.S. Department of Justice or other prosecuting authority that criminal charges be brought against the disclosing entity, as long as EPA determines that the violation is not part of a pattern or practice that demonstrates or involves:

(i) a prevalent management philosophy or practice that conceals or condones environmental violations; or

(ii) High-level corporate officials’ or managers’ conscious involvement in, or willful blindness to, violations of Federal environmental law;

(b) Whether or not EPA recommends the regulated entity for criminal prosecution under this section, the Agency may recommend for prosecution the criminal acts of individual managers or employees under existing policies guiding the exercise of enforcement discretion.

D. Conditions

1. Systematic Discovery

The violation was discovered through:

(a) an environmental audit; or

(b) a compliance management system reflecting the regulated entity's due diligence in preventing, detecting, and correcting violations. The regulated entity must provide accurate and complete documentation to the Agency as to how its compliance management system meets the criteria for due diligence outlined in Section B and how the regulated entity discovered the violation through its compliance management system. EPA may require the regulated entity to make publicly available a description of its compliance management system.

2. Voluntary Discovery

The violation was discovered voluntarily and not through a legally mandated monitoring or sampling requirement prescribed by statute, regulation, permit, judicial or administrative order, or consent agreement. For example, the Policy does not apply to:

(a) emissions violations detected through a continuous emissions monitor (or alternative monitor established in a permit) where any such monitoring is required;

(b) violations of National Pollutant Discharge Elimination System (NPDES) discharge limits detected through required sampling or monitoring; or

(c) violations discovered through a compliance audit required to be performed by the terms of a consent order or settlement agreement, unless the audit is a component of agreement terms to implement a comprehensive environmental management system.
3. Prompt Disclosure

The regulated entity fully discloses the specific violation in writing to EPA within 21 days (or within such shorter time as may be required by law) after the entity discovered that the violation has, or may have, occurred. The time at which the entity discovers that a violation has, or may have, occurred begins when any officer, director, employee or agent of the facility has an objectively reasonable basis for believing that a violation has, or may have, occurred.

4. Discovery and Disclosure Independent of Government or Third-Party Plaintiff

(a) The regulated entity discovers and discloses the potential violation to EPA prior to:

(i) the commencement of a Federal, State or local agency inspection or investigation, or the issuance by such agency of an information request to the regulated entity (where EPA determines that the facility did not know that it was under civil investigation, and EPA determines that the entity is otherwise acting in good faith, the Agency may exercise its discretion to reduce or waive civil penalties in accordance with this Policy);

(ii) notice of a citizen suit;

(iii) the filing of a complaint by a third party;

(iv) the reporting of the violation to EPA (or other government agency) by a “whistleblower” employee, rather than by one authorized to speak on behalf of the regulated entity; or

(v) imminent discovery of the violation by a regulatory agency.

(b) The entity that owns or operates multiple facilities, the fact that one facility is already the subject of an investigation, inspection, information request or third-party complaint does not preclude the Agency from exercising its discretion to make the Audit Policy available for violations self-discovered at other facilities owned or operated by the same regulated entity.

5. Correction and Remediation

The regulated entity corrects the violation within 60 calendar days from the date of discovery, certifies in writing that the violation has been corrected, and takes appropriate measures as determined by EPA to remedy any environmental or human harm due to the violation. EPA retains the authority to order an entity to correct a violation within a specific time period shorter than 60 days whenever correction in such shorter period of time is feasible and necessary to protect public health and the environment adequately. If more than 60 days will be needed to correct the violation, the regulated entity must so notify EPA in writing before the 60-day period has passed. Where appropriate, to satisfy conditions D(5) and D(6), EPA may require a regulated entity to enter into a publicly available written agreement, administrative consent order or judicial consent decree as a condition of obtaining relief under the Audit Policy, particularly where compliance or remedial measures are complex or a lengthy schedule for attaining and maintaining compliance or remediating harm is required.

6. Prevent Recurrence

The regulated entity agrees in writing to take steps to prevent a recurrence of the violation. Such steps may include improvements to its environmental auditing or compliance management system.

7. No Repeat Violations

The specific violation (or a closely related violation) has not occurred previously within the past three years at the same facility, and has not occurred within the past five years as part of a pattern at multiple facilities owned or operated by the same entity. For the purposes of this section, a violation is:

(a) any violation of Federal, State or local environmental law identified in a judicial or administrative order, consent agreement or order, complaint, or notice of violation, conviction or plea agreement; or

(b) any act or omission for which the regulated entity has previously received penalty mitigation from EPA or a State or local agency.

8. Other Violations Excluded

The violation is not one which (a) resulted in serious actual harm, or may have presented an imminent and substantial endangerment, to human health or the environment, or (b) violates the specific terms of any judicial or administrative order, or consent agreement.

9. Cooperation

The regulated entity cooperates as requested by EPA and provides such information as is necessary and requested by EPA to determine applicability of this Policy.
E. Economic Benefit

EPA retains its full discretion to recover any economic benefit gained as a result of noncompliance to preserve a “level playing field” in which violators do not gain a competitive advantage over regulated entities that do comply. EPA may forgive the entire penalty for violations that meet conditions D(1) through D(9) and, in the Agency’s opinion, do not merit any penalty due to the insignificant amount of any economic benefit.

F. Effect on State Law, Regulation or Policy

EPA will work closely with States to encourage their adoption and implementation of policies that reflect the incentives and conditions outlined in this Policy. EPA remains firmly opposed to statutory environmental audit privileges that shield evidence of environmental violations and undermine the public’s right to know, as well as to blanket immunities, particularly immunities for violations that reflect criminal conduct, present serious threats or actual harm to health and the environment, allow noncomplying companies to gain an economic advantage over their competitors, or reflect a repeated failure to comply with Federal law. EPA will work with States to address any provisions of State audit privilege or immunity laws that are inconsistent with this Policy and that may prevent a timely and appropriate response to significant environmental violations. The Agency reserves its right to take necessary actions to protect public health or the environment by enforcing against any violations of Federal law.

G. Applicability

(1) This Policy applies to settlement of claims for civil penalties for any violations under all of the Federal environmental statutes that EPA administers, and supersedes any inconsistent provisions in media-specific penalty or enforcement policies and EPA’s 1995 Policy on “Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations.”

(2) To the extent that existing EPA enforcement policies are not inconsistent, they will continue to apply in conjunction with this Policy. However, a regulated entity that has received penalty mitigation for satisfying specific conditions under this Policy may not receive additional penalty mitigation for satisfying the same or similar conditions under other policies for the same violation, nor will this Policy apply to any violation that has received penalty mitigation under other policies. Where an entity has failed to meet any of conditions D(2) through D(9) and is therefore not eligible for penalty relief under this Policy, it may still be eligible for penalty relief under other EPA media-specific enforcement policies in recognition of good faith efforts, even where, for example, the violation may have presented an imminent and substantial endangerment or resulted in serious actual harm.

(3) This Policy sets forth factors for consideration that will guide the Agency in the exercise of its enforcement discretion. It states the Agency’s views as to the proper allocation of its enforcement resources. The Policy is not final agency action and is intended as guidance. This Policy is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States. As with the 1995 Audit Policy, EPA may decide to follow guidance provided in this document or to act at variance with it based on its analysis of the specific facts presented. This Policy may be revised without public notice to reflect changes in EPA’s approach to providing incentives for self-policing by regulated entities, or to clarify and update text.

(4) This Policy should be used whenever applicable in settlement negotiations for both administrative and civil judicial enforcement actions. It is not intended for use in pleading, at hearing or at trial. The Policy may be applied at EPA’s discretion to the settlement of administrative and judicial enforcement actions instituted prior to, but not yet resolved, as of the effective date of this Policy.

(5) For purposes of this Policy, violations discovered pursuant to an environmental audit or compliance management program may be considered voluntary even if required under an Agency “partnership” program in which the entity participates, such as regulatory flexibility pilot projects like Project X. EPA will consider application of the Audit Policy to such partnership projects on a project-by-project basis.

(6) EPA has issued interpretive guidance addressing several applicability issues pertaining to the Audit Policy. Entities considering whether to take advantage of the Audit Policy should review that guidance to see if it addresses any relevant questions. The guidance can be found on the Internet at www.epa.gov/oecca/ore/epolguid.html.

H. Public Accountability

EPA will make publicly available the terms and conditions of any compliance agreement reached under this Policy, including the nature of the violation, the remedy, and the schedule for returning to compliance.

I. Effective Date

This revised Policy is effective May 11, 2000.

Steven A. Herman,
Assistant Administrator for Enforcement and Compliance Assurance

Date:
APPENDIX N

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
[FRS-6537-6] Small Business Compliance Policy
AGENCY: Environmental Protection Agency (EPA)
ACTION: Final Policy Statement

SUMMARY: The Environmental Protection Agency (EPA) today issues its revised final Small Business Compliance Policy to expand the options allowed under the policy for discovering violations and to establish a time period for disclosure. This Policy was originally titled the Policy on Compliance Incentives for Small Businesses. This Policy is intended to promote environmental compliance among small businesses by providing incentives for voluntary discovery, prompt disclosure, and prompt correction of violations. The Policy accomplishes this in two ways: by setting forth guidelines for the Agency to apply in reducing or waiving penalties for small businesses that come forward to disclose and make good faith efforts to correct violations, and by deferring to State, local and Tribal governments that offer these incentives. Major revisions released today include lengthening the prompt disclosure period from 10 to 21 calendar days and broadening the applicability of the Policy to violations uncovered by small businesses through any means of voluntary discovery.

DATES: This policy is effective May 11, 2000.

ADDRESS: Additional documentation relating to the development of this policy is contained in the Office of Enforcement and Compliance Assurance (OECA) public docket (EC-P-1999-009). An index to the docket may be obtained by contacting the Enforcement and Compliance Docket and Information Center by telephone at (202) 564-2614 or (202) 564-2119, by fax at 2 (202) 564-1011, or by email at docket.eoca@epa.gov. Office hours are 8:00 a.m. to 4:00 p.m., Monday through Friday, except legal holidays. An additional contact is Ginger Goffin (202) 564-7072; fax (202) 564-009; e-mail: goffin Ginger@epa.gov.

SUPPLEMENTARY INFORMATION:

Introduction. Five years ago, EPA reorganized its compliance programs. This reorganization was undertaken by Administrator Browner with a goal of making EPA’s enforcement and compliance programs more effective in protecting public health, safety and the environment. The reorganization also improved and enhanced EPA’s ability to reach out to small businesses with information to help them comply with environmental requirements. Five years after the reorganization, EPA conducted outreach efforts to obtain feedback on compliance and enforcement activities, on ways to further improve public health, safety and the environment through compliance efforts, and on actions the Agency has taken over the past five years. From these outreach efforts and from meetings and conference calls with interested stakeholder groups, EPA received feedback that improvements were needed to both its Audit Policy and to its Small Business Policy. In response to that feedback, OECA reviewed ways to improve these Policies.

Background and History. EPA issued two incentives policies in 1995 and 1996. The “Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations,” informally known as the “Audit Policy,” was issued in December 1995. See 60 FR 66706 (Dec. 22, 1995). The purpose of the Audit Policy, which is available to entities of any size, is to enhance protection of human health, safety and the environment by encouraging regulated businesses to voluntarily discover, promptly disclose, expediently correct and prevent violations of federal environmental law. Benefits available to businesses that qualify for the Audit Policy include reductions in the amount of civil penalties and no recommendation for prosecution of potential criminal violations. The Audit Policy has been recently modified, and the Final revised Audit Policy is being published today in the Federal Register.

To address the special needs of small businesses EPA issued the “Policy on Compliance Incentives for Small Businesses,” which is commonly called the “Small Business Policy,” in June 1996. See 61 FR 27984 June 3, 1996. The Small Business Policy implements section 225 of the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996. The term “small business” will be used throughout this Policy, however this term will also cover entities such as small governments and small organizations as defined in SBREFA. Under the existing Small Business Policy, EPA will waive or reduce civil penalties whenever a small business makes a good faith effort to comply with environmental requirements by discovering violations as part of a government sponsored compliance assistance program or a voluntary environmental audit, promptly disclosing those violations, and correcting them in a timely manner. If the small business meets all the criteria in the policy, including violation history, correction timeframe, and lack of harm, EPA will waive 100% of the gravity component of the civil penalty. Moreover, EPA will defer to State, local and Tribal actions that are consistent with the criteria set forth in this Policy. The Small Business Policy provides penalty reduction as an incentive for small businesses, who are less likely than large businesses to have sophisticated environmental expertise, to seek for compliance assistance. This policy was also simpler for small businesses to use.

There are several notable differences between the existing Audit Policy and Small Business Policy. First, the policies allow penalty reduction for violations discovered in different ways. The Audit Policy addresses violations discovered through systematic methods such as audits as well as through non-systematic methods. The Small Business Policy applies only to violations discovered through audits and during government sponsored on-site compliance assistance activities. Second, the penalty reduction granted by the policies varies. The Audit Policy provides 100% reduction of the gravity component of the penalty (explained below) for systematic discoveries (i.e., part of a regular audit program) and 75% for non-systematic discoveries. The Small Business Policy grants provides up to 100% reduction of the gravity component of the penalty for violations discovered either through regular audits or during government sponsored on-site compliance assistance activities. Finally, the period...
within which violations must be corrected is different. Under the Audit Policy, businesses must correct a violation within up to 60 days of its discovery to qualify for penalty reduction. Under the Small Business Policy, a business must generally correct a violation within 180 days of its discovery to qualify for penalty reduction, and within 360 days if the correction involves pollution prevention modifications.

In addition to these notable differences, the Audit Policy addresses several issues not covered by the Small Business Policy: criminal conduct and multi-facility disclosures. The Small Business Policy is inapplicable for criminal violations. Violations that may involve criminal conduct can be addressed under the Audit Policy. In the unlikely situation where a disclosure involves a multi-facility business, the Agency will identify the relevant provisions of the Audit and Small Business Policies.

**Changes to Policy.** EPA is today making several major changes to the Small Business Compliance Policy. All of these changes will make it easier for small businesses to take advantage of the Small Business Compliance Policy. These changes result from EPA’s evaluation of comments received on our proposed modification of the Small Business Compliance Policy, which was published on July 29, 1999. See 64 FR 41116.

The following sections discuss the two major changes that we have made to the Small Business Compliance Policy: expansion of options for discovery of violations and lengthening the disclosure period.

1. Expanded Options for Discovery of Violations. Comments submitted to EPA suggested that this Policy should be expanded to include violations that are discovered by a variety of compliance assistance activities, including participation in compliance programs or the use of tools that have been developed or sponsored by EPA, the States, and local, private and nonprofit assistance providers. Based on its evaluation of those comments, EPA has decided in the revised Small Business Compliance Policy to allow small businesses to obtain penalty relief if violations are discovered by any voluntary means in addition to discovery as the result of government sponsored on-site compliance assistance activities or environmental audits. For example, voluntary discovery could result from compliance management systems (CMSs), pollution prevention assessments, participation in mentoring programs, training classes, use of on-line compliance assistance centers, and use of checklists. These programs and activities need not be associated with environmental regulatory agencies, but may be associated with any public, private, or non-profit organization. The Agency wants to encourage participation in those programs or activities that could increase compliance, improve efficiency, and reduce pollution.

There are a variety of activities and sources of information that a small business can use to learn more about environmental regulatory requirements. EPA and the States provide various forms of compliance assistance. Some State assistance programs are run as confidential services to the small business community. If a small business wishes to obtain a corrections period under this policy after receiving compliance assistance from a confidential program, the business must promptly disclose the violations to the EPA or the State or Tribal government agency which is applying a similar policy and comply with the other provisions of this Policy.

2. Clarify and Lengthen the Disclosure Period. This revised Small Business Compliance Policy extends the time period within which the small business must fully disclose a violation from 10 to 21 calendar days. The original Policy required "prompt disclosure" for compliance assistance discovery and 10 day disclosure for discoveries made through an environmental audit. Lengthening the disclosure period to 21 calendar days regardless of how the violation was discovered will give small businesses more opportunity to make use of the Small Business Compliance Policy while allowing EPA to get timely reporting of violations. Such timely reporting provides the Agency with clear notice of violations that have or may have occurred and the opportunity to respond if necessary, as well as an accurate picture of a given business's compliance record. Lengthening the disclosure period to 21 calendar days is also consistent with a similar change that EPA made to the Audit Policy.

EPA received comment that there might be situations where small businesses would not able to disclose within the 21 calendar day period. Therefore the revised Small Business Compliance Policy addresses this issue. Where the 21 calendar day disclosure period has not expired and a small business knows that it will be unable to disclose within that time period, the small business is advised to contact the appropriate EPA Office before the period expires to request additional time. For situations in which the 21 calendar day disclosure period has already expired, the Agency may accept a late disclosure in the exceptional case, such as where there are complex circumstances. In such instances, the small business will need to demonstrate that an exceptional case exists.

With the broadening of the options for the discovery of violations, there was some concern by one commenter in a follow-up conversation about the event that triggers the beginning of the 21 calendar day disclosure period. The 21 calendar day disclosure period begins when the small business discovers that a violation has, or may have, occurred. Discovery occurs when any officer, director, employee or agent of the facility becomes aware of any facts that reasonably lead him or her to believe that a violation has or may have occurred at the facility.

**Other Issues Addressed by Public Comment.** There were also issues that the public commented on, either through outreach activities or in response to the Agency's proposed modifications. These covered reduction of penalties, implementation of the policy, and the combination of the Audit Policy and the Small Business Compliance Policy.

1. Penalty Reduction. EPA did not change the Small Business Compliance Policy provisions on reducing or eliminating the gravity component of civil penalties that it would otherwise seek. Civil penalties are made up of two components: a gravity component and an economic benefit component. The gravity component typically reflects the nature of the violations, the duration of the violations, the environmental, safety or public health impacts of the violations, good faith efforts by the business to promptly remedy the violation, and the business's overall record of compliance with environmental regulations. Under this Policy, the Agency will grant 100% reduction of the gravity component of the penalty for violations provided all the other criteria in the policy are met. The Agency believes the incentive of 100% reduction of the gravity component should encourage small businesses to disclose violations promptly and correct them within the specified time period.
The economic benefit component typically reflects any monetary advantage a small business has derived from the violations. For example, if a small business significantly reduced its expenses by not purchasing and installing an emission control device to meet regulatory requirements, then that small business has gained an economic benefit or advantage over its competitors who have complied with the environmental requirements. We received a comment that the possibility of being subject to the economic benefit component of a civil penalty would keep small businesses from using the policy. However, other commenters stated that the economic benefit component should be retained to protect laws abiding small businesses from being placed at a competitive disadvantage to those which do not comply.

EPA retains discretion to consider and collect economic benefit where a significant benefit was gained, although based on its experience, the Agency does not anticipate the need to exercise this discretion often. To date, the vast majority of the disclosures under the Audit Policy and all of the disclosures under the Small Business Compliance Policy have not necessitated recovery of economic benefit.

2. Implementation of the Policy. EPA has modified the Small Business Compliance Policy in format and language to provide the information in a more understandable manner. This in part helps to respond to comments about how we have implemented the Policy. In addition, when they become available, EPA will provide a fact sheet, contact list, and other information about the Policy at the EPA web site (http://www.epa.gov/oeca/scrubs1.html) to increase the usefulness of the Policy. We will also ensure that other internet sites such as EPA’s Small Business Ombudsman web site and the Compliance Assistance Center’s web sites (all 9 Centers available at http://www.epa.gov/oeca/main/compass/compcenters.html) link to this information about the Policy. Staff and other compliance assistance activities and initiatives will also provide information about the Small Business Compliance Policy.

Enhanced implementation of the Policy also involves improved procedures and coordination within EPA. EPA Headquarters and Regional staff working on the Audit Policy as well as this Small Business Compliance Policy are coordinating on issues and procedures to ensure national consistency in its application and to improve the timeliness of the Agency’s review of each disclosure. In most circumstances, EPA will respond to a small business within 60 days of disclosure of a violation.

3. Combining Both Compliance Incentives Policies. As part of the Agency’s evaluations of the Audit and Small Business Policies and given the similarities between the two Policies, EPA asked for comments on the advisability of combining them. In particular, the Agency was interested in whether small businesses would be more likely to audit (or seek compliance assistance) and self-disclose violations if the two policies were merged. EPA received a range of comments supportive of combining the two policies if doing so would simplify the process for small businesses. After a careful review, EPA decided that it is preferable for small businesses to have a separate policy tailored specifically for them. The Small Business Compliance Policy: 1) is shorter and simpler, 2) contains additional benefits for small businesses such as a longer correction period and 100% penalty reduction of the gravity component for all covered violations, and 3) can be more easily distributed with compliance assistance materials developed just for small businesses.

We expect these changes to enable more small businesses to use the policy and thereby promote environmental compliance.

**SMALL BUSINESS COMPLIANCE POLICY**

**A. INTRODUCTION AND PURPOSE**

The Small Business Compliance Policy is intended to promote environmental compliance among small businesses by providing incentives for them to make use of compliance assistance programs, environmental audits, or compliance management systems (CMS), or to participate in any activities that may increase small businesses' understanding of the environmental requirements with which they must comply. The Policy accomplishes this in two ways: by waiving or reducing civil penalties to which a small business might otherwise be subject, and by deferring to States and local governments or tribal authorities that offer these incentives consistent with the criteria established in this Policy.

EPA will waive or reduce the gravity component of civil penalties whenever a small business makes a good faith effort to comply with environmental requirements by:

1. voluntarily disclosing a violation,
2. promptly disclosing the violation within the required time period, and
3. expeditiously correcting the violation within the proper timeframe.

To obtain the benefits of the Policy, the facility must also meet criteria on violation history, lack of harm, and criminal conduct.

**B. BACKGROUND**

This Policy implements section 223 of the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996.

**C. APPLICABILITY**

This Policy applies to facilities owned by small businesses as defined here. A small business is a person, corporation, partnership, or other entity that employs 100 or fewer individuals (across all facilities and operations owned by the small business). Entities, as defined under SBREFA, also include small governments and small organizations. Facilities that are operated by municipalities or other local governments may be covered under the Small Communities Policy (see [http://www.epa.gov/oeca/scrubs1.html](http://www.epa.gov/oeca/scrubs1.html)). Facilities that are disclosing violations involving multiple facilities should refer to the sections on multiple facilities in the Policy on Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations ([the Audit Policy] of April 11, 2000).

1. The number of employees should be considered as full-time equivalents on an annual basis, including contract employees. Full-time equivalents mean 40 hours per year of employment. For example, see 40 C.F.R. §172.2.

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1. NAHB Appendix N
This Policy supersedes the previous version of the policy which was called the Policy on Compliance Incentives for Small Businesses and became effective on June 10, 1996. To the extent that this Policy may differ from the terms of applicable enforcement response policies (including penalty policies) under media-specific programs, this document supersedes those policies.

**D. HOW SMALL BUSINESSES CAN QUALIFY FOR PENALTY REDUCTION**

EPA will eliminate or reduce the gravity component of civil penalties against small businesses based on the following criteria:

1. **Discovery is Voluntary.** The small business discovers a violation on its own before an EPA or State inspection. For example, a small business may discover violations after receiving compliance assistance, conducting an environmental audit or participating in mentoring programs. Other activities that may be useful in discovering violations include establishing CMS, using compliance checklists, reading materials on complying with environmental requirements, using compliance assistance center web sites, and attending training classes.

   The violation must be identified voluntarily, and not through a monitoring or sampling requirement prescribed by statute, regulation, permit, judicial or administrative order, or consent agreement. For example, emissions violations discovered through a continuous emissions monitor (or alternative monitor established in a permit), violations of National Pollutant Discharge Elimination System (NPDES) discharge limits discovered through required sampling or monitoring, and violations discovered through a compliance audit required to be performed by terms of a consent order or settlement order are not eligible for penalty reduction under the policy.

2. **Disclosure Period is Met.**

   i. The small business must voluntarily disclose a specific violation fully and in writing to EPA or the State within 21 calendar days after the small business has discovered that the violation has occurred, or may have occurred. Prompt disclosure is evidence of the small business’s good faith in wanting to achieve or return to compliance as soon as possible. For purposes of this Policy, the time at which a small business discovers that a violation has or may have occurred begins when any officer, director, employee, or agent of the facility becomes aware of any facts that reasonably lead him or her to believe that a violation may exist. If a small business has some doubt as to the existence of a violation, EPA recommends that the business make a prompt disclosure and allow the regulatory authorities to make a definitive determination. This will ensure that the small business meets the disclosure period requirement.

   ii. The disclosure of the violation must occur before the violation was otherwise discovered by, or reported to, EPA, the appropriate state or local regulatory agency. See section F.1 of the Policy below. Good faith also requires that a small business cooperate with EPA and in a timely manner provide such information requested by EPA to determine applicability of this Policy.

   iii. If a small business wishes to obtain a corrections period after receiving compliance assistance from a confidential assistance program, the business may still take advantage of the policy by disclosing the violation to the appropriate regulatory agency.

iii. **Violation is Corrected.** The business corrects the violation within the corrections period set forth below. Small businesses are expected to remedy the violations within the shortest practicable period of time. Correcting the violation includes remediating any environmental harm associated with the violation, as well as putting into place procedures to prevent the violation from happening again.

   i. For any violation that cannot be corrected within 50 calendar days of its discovery, the small business must submit a written schedule, or the agency may, at its sole discretion, elect to issue a compliance order with a schedule, as appropriate. The small business must correct any violations within 180 calendar days after the date that they were discovered.

   ii. If the small business intends to correct the violation by putting into place pollution prevention measures, the business may take an additional period of up to 180 calendar days, i.e., up to a period of 360 calendar days from the date the violation is discovered.

4. **When the Policy Does Not Apply.** The Policy does not apply if:

   a. The facility has the following noncompliance history:

      i. It has previously received a warning letter, notice of violation, or field citation, or been subject to a citizen suit or any other enforcement action by a government agency for a violation of the same requirement within the past three years.

      ii. It has been granted penalty reduction under this Policy (or a similar State or Tribal policy) for a violation of the same or a similar requirement within the past three years.

      iii. It has been subject to two or more enforcement actions for violations of environmental requirements in the past five years, even if this is the first violation of this particular requirement.

   b. The violation was discovered through an information request, inspections, field citations, reported to a federal, state or local agency by a member of the public or a “whistleblower” employee, identified in notices of citizen suits, previously reported to an agency, or through an investigation unless the facility can demonstrate that it did not know that the agency had initiated the investigation and has disclosed in good faith.
c. The violation has caused actual serious harm to public health, safety, or the environment;

d. The violation is one that may present an imminent and substantial endangerment to public health, safety or the environment; or

e. The violation involves criminal conduct.

E. PENALTY REDUCTION GUIDELINES THAT EPA WILL FOLLOW

EPA will exercise its enforcement discretion to eliminate or reduce civil penalties as follows.

1. EPA will waive the gravity component of the civil penalty if a small business satisfies all of the criteria in section D. If, however, a small business has obtained a significant economic benefit from the violation(s), EPA will still waive 100% of the gravity component of the penalty, but may seek the full amount of the significant economic benefit associated with the violations. EPA anticipates that such a significant economic benefit will occur infrequently. However, EPA retains its discretion to ensure that small businesses that comply with public health protections are not put at a serious competitive disadvantage by those who have not complied.

2. If a small business does not fit within the guideline E.1. immediately above, this Policy does not provide any special penalty reduction. However, if a small business has otherwise made a good faith effort to comply, EPA has discretion, pursuant to its applicable enforcement response or penalty policies, to waive or reduce civil penalties.

3. Further, the Agency’s enforcement response and penalty policies may allow for penalty reduction where the small business is able to document an inability to pay all or a portion of the penalty. Penalty reduction in this situation allows the small business to stay in business and to finance compliance. See Guidance on Determining a Violator’s Ability to Pay a Civil Penalty of December 1986 (see http://www.epa.gov/oeca/ore/aeid/comp/acomp/a1.html). Penalties also may be reduced pursuant to the Final EPA Supplemental Environmental Projects Policy of May 1998 (63 FR 24796, June 5, 1998, available at http://www.epa.gov/oeca/sep/sepfinal.html) and Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy of April 11, 2000.

4. This Policy sets forth how the Agency expects to exercise its enforcement discretion in deciding on an appropriate enforcement response and determining an appropriate civil penalty for violations by small businesses. It states the Agency’s views as to the proper allocation of enforcement resources. This Policy is not final agency action and is intended as guidance. It does not create any rights, duties, obligations, or defenses implied or otherwise, in any third parties.

F. ENFORCEMENT FOR VIOLATIONS NOT PROMPTLY CORRECTED

To ensure that this Policy enhances and does not compromise public health and the environment, a business remains subject to all applicable enforcement response policies (which may include discretion whether or not to take formal enforcement action) for all violations that were not remedied within the corrections period. The penalty in such action may include the time period before and during the corrections period.

G. APPLICABILITY TO STATES AND TRIBES

Small businesses may take advantage of small business policies that many States have developed. EPA recognizes that states and tribes are partners in enforcement and compliance assurance and may have adopted their own penalty mitigation policies in Federally-authorized, approved or delegated programs. Therefore, EPA will generally defer to State and Tribal penalty mitigation for self disclosures as long as the State policy meets minimum requirements for Federal delegation and is generally consistent with the criteria set forth in this Policy. Whenever a State agency or Tribe provides a penalty waiver or mitigation or a correction period to a small business pursuant to this Policy or a similar policy, that State or Tribe should notify the appropriate EPA Region to ensure coordination and to request that EPA defer to that action. Similarly, EPA will notify the appropriate State agency or Tribe whenever EPA applies this policy to ensure coordination and request the States defer to EPA’s action. Regional contacts, along with other materials about the Policy, will be posted at the EPA web page (http://www.epa.gov/oeca/smbusi.html) as they become available.

H. EFFECTIVE DATE

This revised Policy is effective May 12, 2000.


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2 The “gravity component” of the penalty includes everything except the economic benefit amount.

3 For example, in some state specific penalty policies, the penalty calculation may be reduced to account for good faith efforts to comply.
APPENDIX O

EPA's Small Business Compliance Policy Factsheet

Background and Purpose

- This Policy promotes environmental compliance among small businesses by providing them with special incentives. EPA will eliminate or reduce penalties for small businesses that voluntarily discover, promptly disclose, and correct violations in a timely manner.
- EPA wants to encourage small businesses to learn about environmental compliance and pollution prevention through the wide range of training, checklists, mentoring, and other activities now available to small businesses through regulatory agencies, private organizations, non-profit organizations, and the Internet. Therefore small businesses that voluntarily discover a violation because they utilized these types of activities may have the penalty eliminated if they meet all the criteria in the Policy.

Effective Date and Citation

- This Policy is effective May 11, 2000 and supersedes the June 1996 version. It was published in the Federal Register on April 11, 2000, 65 FR 19630.

Who Qualifies to Use this Policy

- For purposes of this Policy, a small business is defined as a person, corporation, partnership, or other entity that employs 100 or fewer individuals across all facilities and operations owned by the entity. Entities can also include small governments and small organizations.

How to Qualify for Penalty Elimination or Reduction

- EPA will eliminate the entire civil penalty* if a small business satisfies all four of the criteria below:
  - The small business voluntarily discloses a violation. Violations could be discovered after attending training classes or seminars, receiving on-site compliance assistance, participating in mentoring programs, or using compliance guides or checklists downloaded from the Internet.
  - The small business voluntarily discloses the violation within 21 days. This disclosure must be sent in writing to the regulatory agency.
  - Corrections Period – the business corrects the violation and remedies any damage associated with the violation within 180 days of its discovery. However, if the correction will take longer than 90 days, a written schedule will be necessary. For small businesses that are correcting the violation by using pollution prevention technologies, they may have an additional period of 180 days, i.e. up to a period of 360 days.
  - The Policy applies if the:
    a. violation has not caused actual serious harm to public health, safety, or the environment;
    b. violation is not one that may present an imminent and substantial endangerment to public health or the environment;
    c. violation does not involve criminal conduct;
    d. facility has an appropriate compliance record. The small business hasn't used this Policy for a violation of the same or similar requirement within the past 3 years and has not been subject to two or more enforcement actions for any environmental violations in 5 years; and
    e. violation has not already been discovered by the agency through inspections or citations, or other methods. A legally required monitoring procedure was not violated.

*In the rare instance where the small business has obtained a significant economic benefit from the violation(s) (i.e., economic advantage over its competitors), EPA will waive 100% of the gravity component of the civil penalty, but may seek the full amount of any economic benefit associated with the violations. As of March 2000, EPA has never sought to collect economic benefit since this Policy was originally issued in 1996.

Applicability to States

- EPA will defer to comparable State and Tribal Policies if they are generally consistent with this Policy.

For More Information contact Ginger Golliffe at 202-564-7072 or visit http://www.epa.gov/oeca/smbusi.html

Information about using the Policy, questions and answers, the types of violations that have been disclosed and any disclosures that have prompted EPA to collect economic benefit will be posted and periodically updated on the website.

Listed below are the regional contacts for the Policy and small business issues. The Small Business Liaisons may also be able to provide more general information on compliance assistance and this Policy.

SBCP Fact Sheet June 2000
APPENDIX P

EPA SUPPLEMENTAL ENVIRONMENTAL PROJECTS POLICY

Effective May 1, 1998

A. INTRODUCTION

1. Background

In settlements of environmental enforcement cases, the U.S. Environmental Protection Agency (EPA) requires the alleged violators to achieve and maintain compliance with Federal environmental laws and regulations and to pay a civil penalty. To further EPA’s goals to protect and enhance public health and the environment, in certain instances environmentally beneficial projects, or Supplemental Environmental Projects (SEPs), may be part of the settlement. This Policy sets forth the types of projects that are permissible as SEPs, the penalty mitigation appropriate for a particular SEP, and the terms and conditions under which they may become part of a settlement. The primary purpose of this Policy is to encourage and obtain environmental and public health protection and improvements that may not otherwise have occurred without the settlement incentives provided by this Policy.

In settling enforcement actions, EPA requires alleged violators to promptly cease the violations and, to the extent feasible, remediate any harm caused by the violations. EPA also seeks substantial monetary penalties in order to deter noncompliance. Without penalties, regulated entities would have an incentive to delay compliance until they are caught and ordered to comply. Penalties promote environmental compliance and help protect public health by deterring future violations by the same violator and deterring violations by other members of the regulated community. Penalties help ensure a national level playing field by ensuring that violators do not obtain an unfair economic advantage over their competitors who made the necessary expenditures to comply on time. Penalties also encourage regulated entities to adopt pollution prevention and recycling techniques in order to minimize their pollutant discharges and reduce their potential liabilities.

Statutes administered by EPA generally contain penalty assessment criteria that a court or administrative law judge must consider in determining an appropriate penalty at trial or a hearing. In the settlement context, EPA generally follows these criteria in exercising its discretion to establish an appropriate settlement penalty. In establishing an appropriate penalty, EPA considers such factors as the economic benefit associated with the violations, the gravity or seriousness of the violations, and prior history of violations. Evidence of a violator’s commitment and ability to perform a SEP is also a relevant factor for EPA to consider in establishing an appropriate settlement penalty. All else being equal, the final settlement penalty will be lower for a violator who agrees to perform an acceptable SEP compared to the violator who does not agree to perform a SEP.

The Agency encourages the use of SEPs that are consistent with this Policy. SEPs may not be appropriate in settlement of all cases, but they are an important part of EPA’s enforcement program. While penalties play an important role in environmental protection by deterring violations and creating a level playing field, SEPs can play an additional role in securing significant environmental or public health protection and improvements. SEPs may be particularly appropriate to further the objectives in the statutes EPA administers and to achieve other policy goals, including promoting pollution prevention and environmental justice.

2. Pollution Prevention and Environmental Justice

The Pollution Prevention Act of 1990 (42 U.S.C. § 13101 et seq., November 5, 1990) identifies an environmental management hierarchy in which pollution “should be prevented or reduced whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort…” (42 U.S.C. §13103). Selection and evaluation of proposed SEPs should be conducted generally in accordance with this hierarchy of environmental management, i.e., SEPs involving pollution prevention techniques are preferred over other types of reduction or control strategies, and this can be reflected in the degree of consideration accorded to a defendant/respondent before calculation of the final monetary penalty.

Further, there is an acknowledged concern, expressed in Executive Order 12898 on environmental justice, that certain segments of the nation’s population, i.e., low-income and/or minority populations, are disproportionately burdened by pollutant exposure. Emphasizing SEPs in communities where environmental justice concerns are present helps ensure that persons who spend significant portions of their time in areas, or environmental justice is not a specific technique or process but an overarching goal, it is not listed as an issue.

3. Using this Policy

In evaluating a proposed project to determine if it qualifies as a SEP and then determining how much penalty mitigation is appropriate, Agency enforcement and compliance personnel should use the following five-step process:

(1) Ensure that the project meets the basic definition of a SEP. (Section B)
(2) Ensure that all legal guidelines, including nexus, are satisfied. (Section C)
(3) Ensure that the project fits within one (or more) of the designated categories of SEPs. (Section D)
(4) Determine the appropriate amount of penalty mitigation. (Section E)
(5) Ensure that the project satisfies all of the implementation and other criteria. (Sections F, G, H, I and J)

4. Applicability

This Policy revises and hereby supersedes the February 12, 1991 Policy on the Use of Supplemental Environmental Projects in EPA Settlements and the May 1995 Interim Revised Supplemental Environmental Projects Policy. This Policy applies to settlements of all civil judicial and administrative actions filed after the effective date of this Policy (May 1, 1998), and to all pending cases in which the government has not reached agreement in principle with the alleged violator on the specific terms of a SEP.

This Policy applies to all civil judicial and administrative enforcement actions taken under the authority of the Office of Justice in reviewing proposed SEPs in settlement of citizen suits. This Policy also applies to federal agencies that are liable for the payment of civil penalties. Claims for stipulated penalties for violations of consent decrees or other settlement agreements may not be mitigated by the use of SEPs.1

This is a settlement Policy and thus 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 accept a proposed SEP as part of a settlement, and the amount of any penalty mitigation that may be given for a particular SEP, is to be decided, for one or more reasons, that a SEP is not appropriate (e.g., the cost of reviewing a SEP proposal is or reliability to complete the proposed SEP, or the detriment value of the higher penalty amount outweighs the benefits of the proposed SEP).

This Policy establishes a framework for EPA to use in exercising its enforcement discretion in determining appropriate settlements. In some cases, application of this Policy may not be possible, in whole or in part, in approach.
B. DEFINITION AND KEY CHARACTERISTICS OF A SEP

Supplemental environmental projects are defined as **environmentally beneficial projects** which a defendant/respondent agrees to undertake in settlement of an enforcement action, but which the defendant/respondent is not otherwise legally required to perform. The three bold key parts of this definition are elaborated below.

"Environmentally beneficial" means a SEP must improve, protect, or reduce risks to public health, or the environment at large. While in some cases a SEP may provide the alleged violator with certain benefits, there must be no doubt that the project primarily benefits the public health or the environment.

"In settlement of an enforcement action" means: 1) EPA has the opportunity to help shape the scope of the project before it is implemented; and 2) the project is not commenced until after the Agency has identified a violation (e.g., issued a notice of violation, administrative order, or complaint).\(^{18}\)

"Not otherwise legally required to perform means" the project or activity is not required by any federal, state or local law or regulation. Further, SEPs cannot include actions which the defendant/respondent is likely to be required to perform:

(a) as injunctive relief\(^{18}\) in the instant case;
(b) as injunctive relief in another legal action EPA, or another regulatory agency could bring;
(c) as part of an existing settlement or order in another legal action; or,
(d) by a state or local requirement.

SEPs may include activities which the defendant/respondent will become legally obligated to undertake two or more years in the future, if the project will result in the facility coming into compliance earlier than the deadline. Such "accelerated compliance" projects are not allowable, however, if the regulation or statute provides a benefit (e.g., a higher emission limit) to the defendant/respondent for early compliance.

Also, the performance of a SEP reduces neither the stringency nor timeliness requirements of Federal environmental statutes and regulations. Of course, performance of a SEP does not alter the defendant/respondent's obligation to remedy a violation expeditiously and return to compliance.

C. LEGAL GUIDELINES

EPA has broad discretion to settle cases, including the discretion to include SEPs as an appropriate part of the settlement. The legal evaluation of whether a proposed SEP is within EPA's authority and consistent with all statutory and Constitutional requirements may be a complex task. Accordingly, this Policy uses five legal guidelines to ensure that our SEPs are within the Agency's and a federal court's authority, and do not run afoul of any Constitutional or statutory requirements.\(^{18}\)

1. A project cannot be inconsistent with any provision of the underlying statutes.
2. All projects must advance at least one of the objectives of the environmental statutes that are the basis of the enforcement action and must have adequate nexus. Nexus is the relationship between the violation and the proposed project. This relationship exists only if:
   a. the project is designed to reduce the likelihood that similar violations will occur in the future; or
   b. the project reduces the adverse impact to public health or the environment to which the violation at issue contributes; or
   c. the project reduces the overall risk to public health or the environment potentially affected by the violation at issue.

Nexus is easier to establish if the primary impact of the project is at the site where the alleged violation occurred or at a different site in the same ecosystem or within the immediate geographic area. Such SEPs may have sufficient nexus even if the SEP addresses a different pollutant in a different medium. In limited cases, nexus may exist even though a project will involve activities outside of the United States.\(^{18}\) The cost of a project is not relevant to whether there is adequate nexus.

3. EPA may not play any role in managing or controlling funds that may be set aside or escrowed for performance of a SEP. Nor may EPA retain authority to manage or administer the SEP. EPA may, of course, perform oversight to ensure that a project is implemented pursuant to the provisions of the settlement and have legal recourse if the SEP is not adequately performed.

4. The type and scope of each project are defined in the signed settlement agreement. This includes the "where, when and how" of a project and is defined by the settlement agreement. Settlements in which the defendant/respondent agrees to spend a certain sum of money on a project(s) to be defined later (after EPA or the Department of Justice signs the settlement agreement) are not allowed.

5. A project cannot be used to satisfy EPA's statutory obligation or another federal agency's obligation to perform a particular activity. Conversely, if a federal statute prohibits the expenditure of federal resources on a particular activity, EPA cannot consider projects that would appear to circumvent that prohibition

b. A project may not provide EPA or any federal agency with additional resources to perform a particular activity for which Congress has specifically appropriated funds. A project may not provide EPA with additional resources to perform a particular activity for which Congress has earmarked funds in an appropriations committee report.\(^{20}\) Further, a project cannot be used to satisfy EPA's statutory or earmark obligations, or another federal agency's statutory obligation, to spend funds on a particular activity. A project, however, may be related to a particular activity for which Congress has specifically appropriated or earmarked funds.

c. A project may not provide additional resources to support specified activities performed by EPA employees or EPA contractors. For example, if EPA has developed a brochure to help a segment of the regulated community comply with environmental requirements, a project may not directly, or indirectly, provide additional resources to revise, copy or distribute the brochure.

d. A project may not provide a federal grantee with additional funds to perform a specific task identified within an assistance agreement.

D. CATEGORIES OF SUPPLEMENTAL ENVIRONMENTAL PROJECTS

EPA has identified seven specific categories of projects which may qualify as SEPs. In order for a proposed project to be accepted as a SEP, it must satisfy the requirements of at least one category plus all the other requirements established in this Policy.

1. Public Health

A public health project provides diagnostic, preventative and/or remedial components of human health care which is related to the actual or potential damage to human health caused by the violation. This may include epidemiological data collection and analysis, medical examinations of potentially affected persons, collection and analysis of blood/urine/ tissue samples, medical treatment and rehabilitation therapy.

Public health SEPs are acceptable only where the primary benefit of the project is the population that was harmed or put at risk by the violations.

2. Pollution Prevention

A pollution prevention project is one which reduces the generation of pollution through "source reduction," i.e., any practice which reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise being released into the environment, prior to recycling treatment or disposal. (After
the pollutant or waste stream has been generated, pollution prevention is no longer possible and the waste must be handled by appropriate recycling, treatment, containment, or disposal methods.

Source reduction may include equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, inventory control, or other operation and maintenance procedures. Pollution prevention also includes any project which protects natural resources through conservation or increased efficiency in the use of energy, water or other materials. "In-process recycling," wherein waste materials produced during a manufacturing process are returned directly to production as raw materials on site, is considered a pollution prevention project.

In all cases, for a project to meet the definition of pollution prevention, there must be an overall decrease in the amount and/or toxicity of pollution released to the environment, not merely a transfer of pollution among media. This decrease may be achieved directly or through increased efficiency (conservation) in the use of energy, water or other materials. This is consistent with the Pollution Prevention Act of 1990 and the Administrator's "Pollution Prevention Policy Statement: New Directions for Environmental Protection," dated June 15, 1993.

3. Pollution Reduction

If the pollutant or waste stream already has been generated or released, a pollution reduction approach— which employs recycling, treatment, containment or disposal techniques— may be appropriate. A pollution reduction project is one which results in a decrease in the amount and/or toxicity of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise being released into the environment by an operating business or facility by a means which does not qualify as "pollution prevention." This may include the installation of more effective end-of-process control or treatment technology, or improved containment, or safer disposal of an existing pollutant source. Pollution reduction also includes "out-of-process recycling," wherein industrial waste collected after the manufacturing process and/or consumer waste materials are used as raw materials for production offshore.

4. Environmental Restoration and Protection

An environmental restoration and protection project is one which enhances the condition of the ecosystem or immediate geographic area adversely affected. These projects may be used to restore or protect natural environments (such as ecosystems) and man-made environments, such as facilities and buildings. This category also includes any project which protects the ecosystem from actual or potential damage resulting from the violation or improves the overall condition of the ecosystem. Examples of such projects include: restoration of a wetland in the same ecosystem along the same avian flyway in which the facility is located; or purchase and management of a watershed area by the defendant/respondent to protect a drinking water supply where the violation (e.g., a reporting violation) did not directly damage the watershed but potentially could lead to damage due to unreported discharges. This category also includes projects which protect for the protection of endangered species (e.g., developing conservation programs or protecting habitat critical to the well-being of a species endangered by the violation).

In some projects where a defendant/respondent has agreed to restore and then protect certain lands, the question arises as to whether the project may include the creation or maintenance of certain recreational improvements, such as hiking and bicycle trails. The costs associated with such recreational improvements may be included in the total SEP cost provided they do not impair the environmentally beneficial purposes of the project and they constitute only an incidental portion of the total resources spent on the project.

In some projects where the parties intend that the property be protected so that the ecological and pollution reduction purposes of the land are maintained in perpetuity, the defendant/respondent may sell or transfer the land to another party with the established resources and expertise to perform this function, such as a state park authority. In some cases, the U.S. Fish and Wildlife Service or the National Park Service may be able to perform this function.

With regard to man-made environments, such projects may involve the remediation of facilities and buildings, provided such activities are not otherwise legally required. This includes the removal/mitigation of contaminated materials, such as soils, asbestos and lead paint, which are a continuing source of releases and/or threat to individuals.

5. Assessments and Audits

Assessments and audits, if they are not otherwise available as injunctive relief, are potential SEPs under this category. There are three types of projects in this category: a. pollution prevention assessments; b. acceptable as SEPs when the defendant/respondent agrees to provide EPA with a copy of the report. The results may be made available to the public, except to the extent they constitute confidential business information pursuant to 40 CFR Part 2, Subpart B.

a. Pollution prevention assessments are systematic, internal reviews of specific processes and operations generation of toxic and hazardous materials and other wastes. To be eligible for SEPs, such assessments must be conducted using a recognized pollution prevention assessment or waste minimization procedure to an implementation commitment by the defendant/respondent. Implementation is not required because many of the implementation recommendations may constitute activities that are in the defendant/respondent's own economic interest.

b. Environmental quality assessments are investigations of the condition of the environment at a site not owned or operated by the defendant/respondent; the environment impacted by a site or a facility regardless of whether the site or facility is owned or operated by the defendant/respondent; or threats to human health operated by the defendant/respondent. These include, but are not limited to: investigations of levels or sources of contamination in any environmental media at a site; or monitoring of the air, soil, or water in accordance with recognized protocols, if available, applicable to the type of assessment to be undertaken.

Expanded sampling or monitoring by a defendant/respondent of its own emissions or operations does not qualify as a SEP to the extent it is ordinarily available as injunctive relief.

Environmental quality assessment SEPs may not be performed on the following types of sites: sites that are on the National Priority List under CERCLA § 105, 40 CFR Part 300, Appendix B; sites that would qualify for Pollution Contingency Planning, 40 CFR § 300.415; and sites for which the defendant/respondent or another party would likely be ordered to perform a remediation activity pursuant to CERCLA §106, RCRA §7003, or similar federal law.

6. Environmental Compliance Promotion

An environmental compliance promotion project provides training or technical support to other members of the regulated community to: 1) identify, achieve and maintain compliance with applicable statutory and regulatory requirements and beyond compliance by reducing the generation, release or disposal of pollution, knowledge, or ability to implement the project itself; and, if so, the defendant/respondent should be ADE. Acceptable projects may include, for example, producing a seminar directed related to correcting widespread or
Environmental compliance promotion SEPs are acceptable only where the primary impact of the project is focused on the same regulatory program requirements which were violated and where EPA has reason to believe that compliance in the sector would be significantly advanced by the proposed project. For example, if the allegations involved Clean Water Act pretreatment violations, the compliance promotion SEP must be directed at ensuring compliance with pretreatment requirements. Environmental compliance promotion SEPs are subject to special approval requirements per Section J below.

7. Emergency Planning and Preparedness

An emergency planning and preparedness project provides assistance — such as computers and software, communication systems, chemical emission detection and inactivation equipment, HAZMAT equipment, or training — to a responsible state or local emergency response or planning entity. This is to enable these organizations to fulfill their obligations under the Emergency Planning and Community Right-to-Know Act (EPCRA) to collect information to assess the dangers of hazardous chemicals present at facilities within their jurisdiction, to develop emergency response plans, to train emergency response personnel and to better respond to chemical spills.

EPCRA requires regulated sources to provide information on chemical production, storage and use to State Emergency Response Commissions (SERCs), Local Emergency Planning Committees (LEPCs) and Local Fire Departments (LFDs). This enables states and local communities to plan for and respond effectively to chemical accidents and inform potentially affected citizens of the risks posed by chemicals present in their communities, thereby enabling them to protect the environment or ecosystems which could be damaged by an accident. Failure to comply with EPCRA impairs the ability of states and local communities to meet their obligations and places emergency response personnel, the public and the environment at risk from a chemical release.

Emergency planning and preparedness SEPs are acceptable where the primary impact of the project is within the same emergency planning district or state affected by the violations and EPA has not previously provided the entity with financial assistance for the same purposes as the proposed SEP. Further, this type of SEP is allowable only when the SEP involves non-cash assistance and there are violations of EPCRA, or reporting violations under CERCLA § 103, or CA 1122(c), or violations of other emergency planning, spill or release requirements alleged in the complaint.

8. Other Types of Projects

Projects determined by the case team to have environmental merit which do not fit within at least one of the seven categories above but that are otherwise fully consistent with all other provisions of this Policy, may be accepted with the advance approval of the Office of Enforcement and Compliance Assurance.

9. Projects Which Are Not Acceptable as SEPs

The following are examples of the types of projects that are not allowable as SEPs:

a. General public educational or public environmental awareness projects, e.g., sponsoring public seminars, conducting tours of environmental controls at a facility, promoting recycling in a community;

b. Contributions to environmental research at a college or university;

c. Conducting a project, which, though beneficial to a community, is unrelated to environmental protection, e.g., making a contribution to a non-profit, public interest, environmental, or other charitable organization, or donating playground equipment;

d. Studies or assessments without a requirement to address the problems identified in the study (except as provided for in § D.5 above);

e. Projects which the defendant/respondent will undertake, in whole or in part, with low-interest federal loans, federal contracts, federal grants, or other forms of federal financial assistance or non-financial assistance (e.g., loan guarantees).

E. CALCULATION OF THE FINAL PENALTY

Substantial penalties are an important part of any settlement for legal and policy reasons. Without penalties there would be no deterrence, as regulated entities would have little incentive to comply. Additionally, penalties comply on time; violators should not be allowed to obtain an economic advantage over their competitors who comply.

As a general rule, the net costs to be incurred by a violator in performing a SEP may be considered a one-time commitment to comply with the underlying violations and are subject to reasonable options or reductions based on factors such as the good-faith efforts of the violator, the 

6. Final penalty is equal to or exceed either: (a) the economic component; or (b) 25 percent of the gravity component only; whichever is greater.

Calculating the final penalty in a settlement which includes a SEP is a five-step process. Each of the five steps is explained below. The five steps are also summarized in the penalty calculation worksheet attached to this Policy.

Step 1: Settlement Amount Without a SEP

a. The applicable EPA penalty policy is used to calculate the economic benefit of noncompliance.

b. The applicable EPA penalty policy is used to calculate the gravity component of the penalty. The gravity component is equal to the identifiable economic benefit amount after gravity has been adjusted by all other factors in the penalty policy (e.g., audits, good faith, litigation considerations), except for the gravity component.

c. The amounts in steps 1.a and 1.b are added. This sum is the minimum amount that would be necessary to settle the case without a SEP.

Step 2: Minimum Penalty Amount With a SEP

The minimum penalty amount must equal or exceed the economic benefit of noncompliance plus 10 percent of the gravity component, or 25 percent of the gravity component only, whichever is greater. The minimum penalty amount is calculated as follows:

a. Calculate 10 percent of gravity (multiply amount in step 1.b by 0.1).

b. Add economic benefit (amount in step 1.a) to amount in step 2.a.

c. Calculate 25 percent of gravity (multiply amount in step 1.b by 0.25).

d. Identify the minimum penalty amount: the greater of step 2.c or step 2.b.

Step 3: Calculate the SEP Cost

The net present after-tax cost of the SEP, hereinafter called the "SEP COST," is the maximum amount that EPA may take into consideration in determining an appropriate penalty mitigation for performance of a SEP. In order to facilitate evaluation of the SEP COST of a proposed project, the Agency has developed a computer model called PROJECTS. There are three types of costs that may be associated with performance of a SEP (which are entered into the PROJECTS model): capital costs (e.g., equipment, buildings); one-time nondepreciable costs (e.g., removing contaminated materials, purchasing land, developing a compliance promotion seminar); and annual operation costs and savings (e.g., labor, chemicals, water, power, raw materials). To use PROJECTS, the Agency needs reliable estimates of the costs associated with a defendant/respondent's performance of a SEP, as well as any savings due to such factors as energy efficiency gains, reduced material costs, reduced waste disposal costs, or increases in productivity. For example, if the annual expenditures in

NAHB Appendix P
labor and materials of operating a new waste recycling process is $100,000 per year, but the new process reduces existing hazardous waste disposal expenditures by $30,000 per year, the net cost of $70,000 is entered into the PROJECT model (variable 4).

In order to run the PROJECT model properly (i.e., to produce a reasonable estimate of the net present after-tax cost of the project), the number of years that annual operation costs or savings will be expensed in performing the SEP must be specified. At a minimum, the defendant/respondent must be required to implement the project for the same number of years used in the PROJECT model calculation. (For example, if the settlement agreement requires the defendant/respondent to operate the SEP equipment for two years, two years should be entered as the input for number of years of annual expense in the PROJECT model). If certain costs or savings appear speculative, they should not be entered into the PROJECT model. The PROJECT model is the primary method to determine the SEP COST for purposes of negotiating settlements.\(^{119}\)

EPA does not offer tax advice on whether a regulated entity may deduct SEP expenditures from its income taxes. If a defendant/respondent states that it will not deduct the cost of a SEP from its taxes and it is willing to commit to this in the settlement document, and provide the Agency with certification upon completion of the SEP that it has not deducted the SEP expenditures, the PROJECT model calculation should be adjusted to calculate the SEP Cost without reductions for taxes. This is a simple adjustment to the PROJECT model; just enter a zero for variable 7, the marginal tax rate. If a business is not willing to make this commitment, the marginal tax rate in variable 7 should not be set to zero; rather the default settings (or a more precise estimate of the business' marginal tax rate) should be used in variable 7. If the PROJECT model reveals that a project has a negative cost during the period of performance of the SEP, this means that it represents a positive cash flow to the defendant/respondent and is a profitable project. Such a project is generally not acceptable as a SEP. If a project generates a profit, a defendant/respondent should, and probably will, based on its own economic interests, implement the project. While EPA encourages regulated entities to undertake environmentally beneficial projects that are economically profitable, EPA does not believe violators should receive a bonus in the form of penalty mitigation to undertake such projects as part of an enforcement action. EPA does not offer subsidies to complying companies to undertake profitable environmentally beneficial projects and it would thus be inequitable and perverse to provide such subsidies only to violators. In addition, the primary goal of SEPs is to secure a favorable environmental or public health outcome which would not have occurred but for the enforcement case settlement. To allow SEP penalty mitigation for profitable projects would thwart this goal.\(^{120}\)

Step 4: Determine the SEP Mitigation Percentage and the Mitigation Amount

Step 4.a: Mitigation Percentage. After the SEP COST has been calculated, EPA should determine what percentage of that cost may be applied as mitigation against the amount EPA would settle for but for the SEP. The quality of the SEP should be examined as to whether and how effectively it achieves each of the following six factors listed below. (The factors are not listed in order priority.)

Benefits to the Public or Environment at Large. While all SEPs benefit public health or the environment, SEPs which perform well on this factor will result in significant and quantifiable reduction in discharges of pollutants to the environment and the reduction in risk to the general public. SEPs also will perform well on this factor to the extent they result in significant and, to the extent possible, measurable progress in protecting and restoring ecosystems (including wetlands and endangered species habitats).

Innovativeness. SEPs which perform well on this factor will further the development, implementation, or dissemination of innovative processes, technologies, or methods which more effectively: reduce the generation, release or disposal of pollutants; conserve natural resources; restore and protect ecosystems; protect endangered species; or promote compliance. This includes "technology forcing" techniques which may establish new regulatory "benchmarks."

Environmental Justice. SEPs which perform well on this factor will mitigate damage or reduce risk to minority or low income populations which may have been disproportionately exposed to pollution or are at environmental risk.

Community Input. SEPs which perform well on this factor will have been developed taking into consideration input received from the affected community. No credit should be given for this factor if the defendant/respondent did not actively participate in soliciting and incorporating public input into the SEP.

Multimedia Impacts. SEPs which perform well on this factor will reduce emissions to more than one medium.

Pollution Prevention. SEPs which perform well on this factor will develop and implement pollution prevention techniques and practices.

The better the performance of the SEP under each of these factors, the higher the appropriate mitigation percentage. The percent of penalty mitigation is within EPA's discretion; there is no presumption as to the costs with two exceptions:

(1) For small businesses, government agencies or entities, and non-profit organizations, this mitigation project is of outstanding quality.

(2) For any defendant/respondent, if the SEP implements pollution prevention, the mitigation percentage of the SEP COST may be set as high as 100 percent if the defendant/respondent can demonstrate the project is of outstanding quality.

If the government must allocate significant resources to monitoring and reviewing the implementation of a project, a lower mitigation percentage of the SEP COST may be appropriate.

In administrative enforcement actions in which there is a statutory limit (commonly called "caps") on the total maximum penalty that may be sought in a single action, the total penalty mitigation credit due to the SEPs shall not exceed the limit.

Step 4.b: SEP Mitigation Amount. The SEP COST (calculated pursuant to step 3) is multiplied by the mitigation percentage (step 4.a) to obtain the SEP mitigation amount, which is the amount of the SEP that may be used in potentially mitigating the preliminary settlement penalty.

Step 5: Final Settlement Penalty

5.a. The SEP mitigation amount (step 4.b) is then subtracted from the settlement amount without a SEP (step 1.c).

5.b. The greater of step 2.d or step 5.a is the minimum final settlement penalty allowable based on the performance of the SEP.

F. LIABILITY FOR PERFORMANCE

Defendants/respondents (or their successors in interest) are responsible and legally liable for ensuring that the SEP is completed satisfactorily. A defendant/respondent may not transfer this responsibility and liability to someone else, commonly called a third party. Of course, a defendant/respondent may use contractors or consultants to assist it in implementing a SEP.\(^{121}\)

G. OVERSIGHT AND DRAFTING ENFORCEABLE SEPS

The settlement agreement should accurately and completely describe the SEP. (See related legal guideline 4 in § C above.) It should describe the specific actions to be performed by the defendant/respondent and provide for a reliable and objective means to verify that the defendant/respondent has timely completed the project. This may require the defendant/respondent to submit periodic reports to EPA. The defendant/respondent may utilize an outside auditor to verify performance, and the defendant/respondent should be made responsible for the cost of any such activities. The defendant/respondent remains responsible for the quality and timelines of any actions performed or any reports prepared or submitted by the auditor. A final report certified by an
appropriate corporate official, acceptable to EPA, and evidencing completion of the SEP and documenting SEP expenditures, should be required.

To the extent feasible, defendant/respondent should be required to quantify the benefits associated with the project and provide EPA with a report setting forth how the benefits were measured or estimated. The defendant/respondent should agree that whenever it publicizes a SEP or the results of a SEP, it will state in a prominent manner that the project is being undertaken as part of the settlement of an enforcement action.

The drafting of a SEP will vary depending on whether the SEP is being performed as part of an administrative or judicial enforcement action. SEPs with long implementation schedules (e.g., 18 months or longer), SEPs which require EPA review and comment on interim milestone activities, and other complex SEPs may not be appropriate in administrative enforcement actions. Specific guidance on the proper drafting of settlement documents requiring SEPs is provided in a separate document.

H. FAILURE OF A SEP AND STIPULATED PENALTIES

If a SEP is not completed satisfactorily, the defendant/respondent should be required, pursuant to the terms of the settlement document, to pay stipulated penalties for its failure. Stipulated penalty liability should be established for each of the scenarios set forth below as appropriate to the individual case.

1. Except as provided in paragraph 2 immediately below, if the SEP is not completed satisfactorily, a substantial stipulated penalty should be required. Generally, a substantial stipulated penalty is between 75 and 150 percent of the amount by which the settlement penalty was mitigated on account of the SEP.

2. If the SEP is not completed satisfactorily, but the defendant/respondent:
   a) made good faith and timely efforts to complete the project; and b) certifies, with supporting documentation, that at least 90 percent of the amount of money which was required to be spent was expended on the SEP, no stipulated penalty is necessary.

3. If the SEP is satisfactorily completed, but the defendant/respondent spent less than 90 percent of the amount of money required to be spent for the project, a small stipulated penalty should be required. Generally, a small stipulated penalty is between 10 and 25 percent of the amount by which the settlement penalty was mitigated on account of the SEP.

4. If the SEP is satisfactorily completed, and the defendant/respondent spent at least 90 percent of the amount of money required to be spent for the project, no stipulated penalty is necessary.

The determinations of whether the SEP has been satisfactorily completed (i.e., pursuant to the terms of the agreement) and whether the defendant/respondent has made a good faith, timely effort to implement the SEP should be reserved to the sole discretion of EPA, especially in administrative actions in which there is often no formal dispute resolution process.

I. COMMUNITY INPUT

In appropriate cases, EPA should make special efforts to seek input on project proposals from the local community that may have been adversely impacted by the violations. Soliciting community input into the SEP development process can: result in SEPs that better address the needs of the impacted community; promote environmental justice; produce better community understanding of EPA's enforcement and improvement processes between the community and the violating facility. Community involvement in SEPs may be most appropriate in cases where the range of possible SEPs is great and/or multiple SEPs may be negotiated.

When soliciting community input, the EPA negotiating team should follow the four guidelines set forth below.

1. Community input should be sought after EPA knows that the defendant/respondent is interested in doing a SEP and is willing to seek community input, approximately how much money may be available for doing a SEP, and that settlement of the enforcement action is likely. If these conditions are not satisfied, EPA will have very little information to provide communities regarding the scope of possible SEPs.

2. The EPA negotiating team should use both informal and formal methods to contact local community leaders, local chambers of commerce, or other groups. Since EPA may not be able to identify all interested community groups, a public notice in a local newspaper may be appropriate.

3. To ensure that communities have a meaningful opportunity to participate, the EPA negotiating team should provide information to communities about what SEPs are, the opportunities and limits of such projects, the enforcement action, and this can be done by holding a public meeting, usually in the evening, at a local school or justice in conducting this meeting. Sometimes the defendant/respondent may play an active role at this meeting and have its own experts assist in the process.

4. After the initial public meeting, the extent of community input and participation in the SEP development process will have to be determined. The amount of input and participation is likely to vary with each case, will not participate directly in the settlement negotiations. This restriction is necessary because of the way in which community group should directly participate in the negotiations.

J. EPA PROCEDURES

1. Approvals

The authority of a government official to approve a SEP is included in the official's authority to settle an enforcement case and thus, subject to the exceptions set forth here, no special approvals are required. The special approvals apply to both administrative and judicial enforcement actions as follows:

a. Regions in which a SEP is proposed for implementation shall be given the opportunity to review and comment on the proposed SEP.

b. In all cases in which a project may not fully comply with the provisions of this Policy (e.g., see footnote 1), the SEP must be approved by the EPA Assistant Administrator for Enforcement and Compliance Assurance. If a forth a legal analysis supporting the conclusion that the project is within EPA's legal authority and is not otherwise inconsistent with law.

c. In all cases in which a SEP would involve activities outside the United States, the SEP must be approved in advance by the Assistant Administrator and, for judicial cases only, the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice.

d. In all cases in which an environmental compliance promotion project (section D.6) or a project in the "other" category (section D.8) is contemplated, the project must be approved in advance by the appropriate office in OCA, unless otherwise delegated.

2. Documentation and Confidentiality

In each case in which a SEP is included as part of a settlement, an explanation of the SEP with supporting materials (including the PROJECT model printout, where applicable) must be included as part of the case file. The evaluation project and include a description of the expected benefits associated with the SEP. The explanation must include a description by the enforcement attorney of how nexus and the other legal guidelines are satisfied. Documentation and explanations of a particular SEP may constitute confidential information that is protected by various privileges, including the attorney-client privilege and the attorney work-product privilege. Public document and may be released to anyone upon request.
ATTACHMENT

SEP PENALTY CALCULATION WORKSHEET

This worksheet should be used pursuant to section E of the Policy. Specific Applications of this Worksheet in a Case Are Privileged, Confidential Documents.

<table>
<thead>
<tr>
<th>STEP</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEP 1: CALCULATION OF SETTLEMENT AMOUNT WITHOUT A SEP.</strong></td>
<td></td>
</tr>
<tr>
<td>1.a. BENEFIT: The applicable penalty policy is used to calculate the economic benefit of noncompliance.</td>
<td>$</td>
</tr>
<tr>
<td>1.b. GRAVITY: The applicable penalty policy is used to calculate the gravity component of the penalty; this is gravity after all adjustments in the applicable policy.</td>
<td>$</td>
</tr>
<tr>
<td>1.c SETTLEMENT AMOUNT without a SEP: Sum of step 1.a plus 1.b.</td>
<td>$</td>
</tr>
<tr>
<td><strong>STEP 2: CALCULATION OF THE MINIMUM PENALTY AMOUNT WITH A SEP</strong></td>
<td></td>
</tr>
<tr>
<td>2.a 10% of GRAVITY: Multiply amount in step 1.b by 0.10</td>
<td>$</td>
</tr>
<tr>
<td>2.b BENEFIT PLUS 10% of GRAVITY: Sum of step 1.a plus step 2.a.</td>
<td>$</td>
</tr>
<tr>
<td>2.c. 25% of GRAVITY: Multiply amount in step 1.b by 0.25.</td>
<td>$</td>
</tr>
<tr>
<td>2.d MINIMUM PENALTY AMOUNT: Select greater of step 2.c or step 2.b.</td>
<td>$</td>
</tr>
<tr>
<td><strong>STEP 3: CALCULATION OF THE SEP COST USING PROJECT MODEL.</strong></td>
<td>$</td>
</tr>
<tr>
<td><strong>STEP 4: CALCULATION OF MITIGATION PERCENTAGE AND MITIGATION AMOUNT.</strong></td>
<td></td>
</tr>
<tr>
<td>4.a. SEP Cost Mitigation Percentage. Evaluate the project pursuant to the 6 mitigation factors in the Policy. Mitigation percentage should not exceed 80% unless one of the exceptions applies.</td>
<td>%</td>
</tr>
<tr>
<td>4.b. SEP Mitigation Amount. Multiply step 3 by step 4.a</td>
<td>$</td>
</tr>
<tr>
<td><strong>STEP 5: CALCULATION OF THE FINAL SETTLEMENT PENALTY.</strong></td>
<td></td>
</tr>
<tr>
<td>5.a Subtract step 4.b from step 1.c</td>
<td>$</td>
</tr>
<tr>
<td>5.b. Final Settlement Penalty: Select greater of step 2.d or step 5.a.</td>
<td>$</td>
</tr>
</tbody>
</table>
1. In extraordinary circumstances, the Assistant Administrator may consider mitigating potential stipulated penalty liability using SEPs where: (1) despite the circumstances giving rise to the claim for stipulated penalties, the violator has the ability and intention to comply with a new settlement agreement obligation to implement the SEP; (2) there is no negative impact on the detriment purposes of stipulated penalties; and (3) the settlement agreement establishes a range for stipulated penalty liability for the violations at issue. For example, if a respondent/defendant has violated a settlement agreement which provides that a violation of X requirement subjects it to a stipulated penalty between $1,000 and $5,000, then the Agency may consider SEPs in determining the specific penalty amount that should be demanded.

2. Since the primary purpose of this Policy is to obtain environmental or public health benefits that may not have occurred "but for" the settlement, projects which the defendant has previously committed to perform or have been started before the Agency has identified a violation are not eligible as SEPs. Projects which have been committed to or started before the identification of a violation may mitigate the penalty in other ways. Depending on the specifics, if a regulated entity had initiated environmentally beneficial projects before the enforcement process commenced, the initial penalty calculation could be lower due to the absence of recalcitrance, no history of other violations, good faith efforts, less severity of the violations, or a shorter duration of the violations.

3. The statutes EPA administers generally provide a court with broad authority to order a defendant to cease its violations, take necessary steps to prevent future violations, and to remediate any harm caused by the violations. If a court is likely to order a defendant to perform a specific activity in a particular case, such an activity does not qualify as a SEP.

4. These legal guidelines are based on federal law as it applies to EPA; States may have more or less flexibility in the use of SEPs depending on their laws.

5. The immediate geographic area will generally be the area within a 50 mile radius of the site on which the violations occurred. Ecosystem or geographic proximity is not by itself a sufficient basis for nexus; a project must always satisfy subparagraph a, b, or c in the definition of nexus. In some cases, a project may be performed at a facility or site not owned by the defendant/respondent.

6. All projects which would include activities outside the U.S. must be approved in advance by Headquarters and/or the Department of Justice. See section J.

7. Earmarks are instructions for changes to EPA's discretionary budget authority made by appropriations committee in committee reports that the Agency generally honors as a matter of policy.

8. If EPA lacks authority to require repair of the damage caused by the violation, then repair itself may constitute a SEP.

9. Simply preventing new discharges into the ecosystem, as opposed to taking affirmative action directly related to preserving existing conditions at a property, would not constitute a restoration and protection project, but may fit into another category such as pollution prevention or pollution reduction.

10. These federal agencies have explicit statutory authority to accept gifts of land and money in certain circumstances. All projects with these federal agencies must be reviewed and approved in advance. In the agency, usually the Solicitor's Office in the Department of the Interior.

11. For purposes of this Policy, a small business is owned by a person or another entity that employs 100 or fewer individuals. Small businesses could be individuals, privately held corporations, farmers, landowners, partnerships and others. A small community is one comprised of fewer than 2,500 persons.

12. Since most large companies routinely conduct compliance audits, to mitigate penalties for such audits would reward violators for performing an activity that most companies already do. In contrast, these audits are not commonly done by small businesses, perhaps because such audits may be too expensive.

13. Pursuant to the February 1995 Revised Interim Clean Water Act Settlement Penalty Policy, section V, a smaller minimum penalty amount may be allowed for a municipality.