

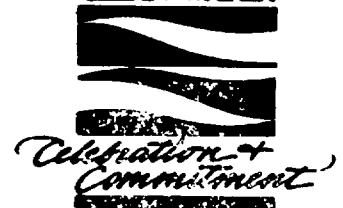


Storm Water Management For Construction Activities

Developing Pollution Prevention Plans And Best Management Practices

SUMMARY GUIDANCE

★ 1992 ★
THE YEAR OF
CLEAN WATER



FOREWORD

This booklet provides summary guidance on the development of storm water pollution prevention plans and identification of appropriate Best Management Practices (BMPs) for construction activities. It provides technical assistance and support for construction activities subject to pollution prevention requirements established under National Pollutant Discharge Elimination System (NPDES) permits for storm water point source discharges.

EPA's storm water program significantly expands the scope and application of the existing NPDES permit system for municipal and industrial process wastewater discharges. It emphasizes pollution prevention and reflects a heavy reliance on BMPs to reduce pollutant loadings and improve water quality. *This booklet provides summary guidance in both of these areas.*

The document summarized here was issued in support of EPA regulations and policy initiatives involving the development and implementation of a National storm water program. The document is Agency guidance only. It does not establish or affect legal rights or obligations. Agency decisions in any particular case will be made applying the laws and regulations on the basis of specific facts when permits are issued or regulations promulgated.

The document and this booklet will be revised and expanded periodically to reflect additional pollution prevention information and data on treatment effectiveness of BMPs. Comments from users will be welcomed. Send comments to U.S. EPA, Office of Wastewater Enforcement and Compliance, 401 M Street, SW, Mail Code EN-336, Washington, DC 20460.

Construction Guidance Executive Summary

Table of Contents

	<u>Page</u>
Overview of Pollution Prevention Plan Requirements	1
Figure -- Six Phases for Developing and Implementing Construction Storm Water Pollution Preventions Plans	2
Site Evaluation and Design Development Phase	3
(A) Collecting Site Information	3
(B) Develop Site Plan Design	3
(C) Describe Construction Activity	4
(D) Prepare Pollution Prevention Site Map	4
Assessment Phase	5
(A) Measure the Site Area	5
(B) Determine the Drainage Areas	5
(C) Calculate the Runoff Coefficient	5
Table 1. Typical "C" Values	6
Control Selection/Plan Design Phase	7
(A) Review and Incorporate State and Local Requirements	7
(B) Select Erosion and Sediment Controls	7
(C) Select Other Controls	8
(D) Select Storm Water Management Controls	9
(E) Indicate the Location of Controls on the Site Map	9
(F) Prepare an Inspection and Maintenance Plan	9
(G) Prepare a Description of Controls	10
(H) Prepare a Sequence of Major Activities	10
Certification and Notification Phase	11
(A) Certify the Pollution Prevention Plan	11
(B) Submit a Notice of Intent	11
Construction/Implementation Phase	13
(A) Implement Controls	13
(B) Inspect and Maintain Controls	13
(C) Maintain Records of Construction Activities	14
(D) Update/Change the Plan	14
(E) Report Releases of Reportable Quantities	14
(F) Provide for Plan Location and Access	14
Final Stabilization/Termination Phase	16

Construction Guidance Executive Summary

Table of Contents (Continued)

	<u>Page</u>
Other References	17
Construction General Permit Requirements Preconstruction Checklist	18
Construction/Implementation Checklist	19
Final Stabilization/Termination Checklist	20
Erosion and Sediment Control Selection Checklist	21
Model Plan	22

A BRIEF GUIDE TO REQUIREMENTS FOR DEVELOPING AND IMPLEMENTING POLLUTION PREVENTION PLANS FOR CONSTRUCTION ACTIVITIES

Storm water runoff is part of the natural hydrologic cycle. However, human activities, particularly urbanization, can alter natural drainage patterns and add pollutants to the rainwater and snowmelt that run off the earth's surface and enter our Nation's rivers, lakes, streams, and coastal waters. In fact, recent studies have shown that storm water runoff is a major source of pollutants impairing our sport and commercial fisheries, restricting swimming, and affecting the navigability of many of our Nation's waters.

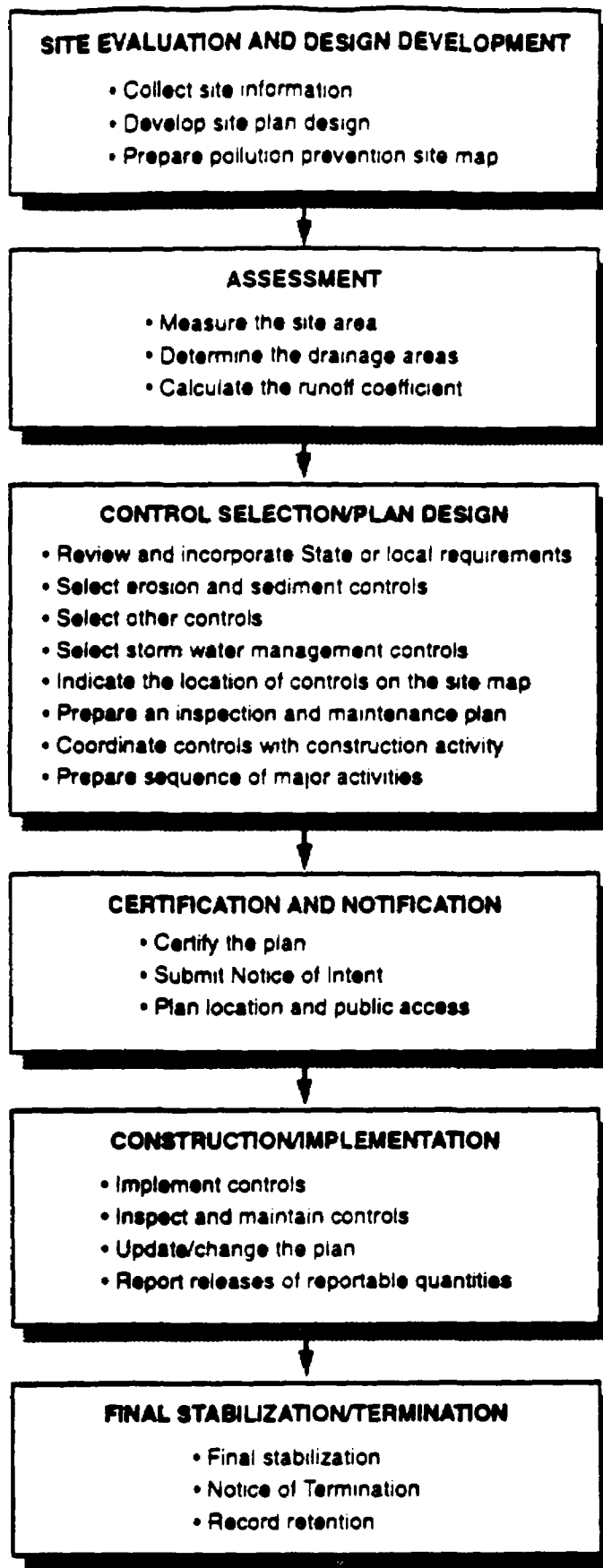
Recognizing the importance of this problem, Congress directed the U.S. Environmental Protection Agency (EPA) to develop a Federal program under the Clean Water Act to regulate certain high priority storm water sources. The issuance of storm water discharge permits under the National Pollutant Discharge Elimination System (NPDES) is a major part of the Agency's efforts to restore and maintain the Nation's water quality. Discharges of storm water runoff from construction sites which disturb 5 or more acres of land must now be covered by an NPDES permit. To deal with the thousands of construction projects which are now required to be covered by storm water permits, EPA strongly encourages the use of general permits. Under the NPDES program, a general permit authorizes discharges from a number of sources. To specifically address storm water discharges from construction sites located in the States and territories that have not been delegated NPDES permitting authority, EPA issued **NPDES General Permits for Storm Water Discharges from Construction Sites** in the September 9 and September 25, 1992, Federal Register. (A complete list of these States and territories to which EPA's permits apply may be found on page 17 of this document.)

The purpose of this document is to describe the steps which must be completed in order for a construction site to comply with the pollution prevention plan requirements contained in EPA's general permits. A detailed manual on how to develop and implement your pollution prevention plan is available from the National Technical Information Service (NTIS). The manual, titled *Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices*, provides much more specific information than this brief guide. Instructions for ordering the detailed manual and a listing of other references that you may find useful can be found on page 17 of this guide. It is important to note that permit requirements will vary from State to State and permit to permit; therefore, you should read your permit carefully.

OVERVIEW OF POLLUTION PREVENTION PLAN REQUIREMENTS

Under the *NPDES General Permits for Storm Water Discharges From Construction Sites*, EPA requires the development and implementation of a pollution prevention plan. A pollution prevention plan for construction is designed to reduce pollution at the construction site, before it can cause environmental problems. Many of the practices and measures required for the pollution prevention plan represent standard operating procedure at many construction sites. Storm water management controls, erosion and sediment controls, inspection and maintenance have all been used at a number of construction projects.

This guide is organized according to the phases of the pollution prevention planning and implementation process. A set of checklists and a model plan at the end of the document are provided to further clarify requirements. As shown on the chart on the following page, pollution prevention planning requirements have been organized to provide you with a step-by-step process for ensuring that pollutants are not making their way into the storm water discharges from your site. The six major phases of the process are (1) site evaluation and design development, (2) assessment, (3) control selection and plan design, (4) certification and notification, (5) construction/implementation, and (6) final stabilization/termination. In addition, all permit holders must meet a number of general requirements.



**SIX PHASES FOR DEVELOPING AND IMPLEMENTING CONSTRUCTION STORM
WATER POLLUTION PREVENTION PLANS**

SITE EVALUATION AND DESIGN DEVELOPMENT PHASE

The first phase in preparing a Storm Water Pollution Prevention Plan for a construction project is to define the characteristics of the site and the type of construction that will be occurring. This phase is broken down into four requirements: (A) collect site information, (B) develop site design, (C) describe construction activity, and (D) prepare pollution prevention site map.

(A) Collect Site Information

Prior to design, it is necessary to collect information about the existing conditions at the construction site. The EPA General Permits require that the Pollution Prevention Plan include the following information:

- **Existing soils information**—Where information exists which describes the soils at the construction site, this data must be included in the pollution prevention plan. Soils data may include soil type, depth of the soil layer, soil texture, infiltration (percolation rate), or whether the soils are susceptible to erosion. Sources of soils information could include soil borings or other geotechnical investigations. Soil Conservation Service (SCS) soil surveys may also be used, and SCS surveys typically indicate whether a soil is erodible.
- **Existing runoff water quality**—If storm water runoff from the proposed construction site has been sampled and analyzed for the presence of any pollutant (e.g., total suspended solids), then the results of the analyses must be included in the pollution prevention plan. In most cases, existing runoff water quality data are not available for a specific site, particularly an undeveloped site. However, if the construction site is on or adjacent to an existing industrial facility, that facility may have collected runoff water quality data to satisfy another permit. If there are no existing data on the quality of runoff from the site, then it is not necessary to collect or analyze storm water samples for the Construction General Permit. Runoff water quality data may sometimes be available from your State or local government, e.g., the local municipal separate storm sewer authority. You may also be able to obtain runoff water quality information from the U.S. Geological Survey (USGS), State, or local watershed protection agencies.
- **Location of surface waters on the construction site**—If the construction site includes or is adjacent to surface waters then the location and extent of the surface waters must be determined so that they may be indicated on the pollution prevention site map. Surface waters include lakes, rivers, streams (both perennial and intermittent), and wetlands.
- **Name of receiving water**—Identify the name and location of the body of water, e.g., stream, creek, run, wetland, river, lake, bay, ocean, that will receive the runoff from the construction site. If the receiving water is a tributary include the name of the ultimate receiving body of water if possible. If the site drains into a Municipal Separate Storm Sewer System, identify the system and indicate the receiving water to which the system discharges. This information is usually available from county, State, or USGS maps.

(B) Develop Site Plan Design

Once the information on the existing site conditions is collected, it is possible to develop a site plan design. In addition to the goals and objectives for the facilities being constructed, the designers should also consider objectives which will limit the amount of pollution in storm water runoff from the construction site, such as:

- Disturb the smallest area possible.
- Avoid disturbance of sensitive areas such as:
 - Steep and/or unstable slopes
 - Surface waters, including wetlands
 - Areas with soils susceptible to erosion
 - Existing drainage channels.
- Identify areas to be preserved or left as open space.

(C) Describe Construction Activity

In preparing your plan, you must (1) describe the purpose or goal of the construction project (e.g., a single family residential development, a multistory office building, or a highway interchange) and (2) list the soil disturbing activities necessary to complete the project. (Soil disturbing activities might include clearing, excavation and stockpiling, rough grading, final or finish grading, preparation for seeding or planting, excavation of trenches, demolition, etc.).

(D) Prepare Pollution Prevention Site Map

The final step of the site evaluation and design development phase is to combine the information collected into a comprehensive pollution prevention site map. The starting point for the pollution prevention site map should be the site plan prepared for the construction design. The map for the construction site should be drawn to scale with topography. The scale of the map should be small enough so that you can easily distinguish important features such as drainage swales and control measures that will be added later. In addition to the location of surface waters, the following information must be included on the site map:

- **Slopes after grading**—Indicate what the location and steepness of slopes will be after grading.
- **Disturbed areas**—Indicate the areas of soil disturbing activities or the total area of the site where soil will be disturbed. Also draw an outline of areas that will not be disturbed.
- **Drainage patterns/discharge points**—Indicate the drainage patterns of the site after the major grading activities and the location of the points where storm water will discharge from the site.
 - To illustrate the drainage pattern of the site, use topographic contour lines or arrows to indicate the direction runoff will flow.
 - Show the location of swales or channels. If there is a new or proposed underground storm drain system on the site, this should be indicated on the Storm Water Pollution Prevention Plan site map as well.

ASSESSMENT PHASE

Once the characteristics of the site and the construction have been defined, the next phase in developing a Storm Water Pollution Prevention Plan is to measure the size of the land disturbance and estimate the impact the project will have on storm water runoff from the site based on information collected in Phase 1. Three things should be done to assess the project: (A) measure the site area, (B) measure the drainage areas, and (C) calculate the runoff coefficient.

(A) Measure the Site Area

The General Permit requires that you indicate in the Storm Water Pollution Prevention Plan estimates of the total site area and the area that will be disturbed. The total site area estimate must represent the size of the parcel of property or right of way on which the construction is occurring. The disturbed area estimate must represent the portion of the total site area which will be disturbed over the course of the construction project. These values can be measured from the pollution prevention site map which is drawn to scale.

(B) Determine the Drainage Areas

Although the size of each drainage area for each point where concentrated flow will leave the site is not required to be included in the pollution prevention plan, this information will help you select and design the sediment control and storm water management measures for your project in the next phase of the plan. Drainage areas are portions of the site where runoff will flow in one particular direction or to a particular discharge point. Use the drainage patterns indicated on the site map to determine the drainage areas.

(C) Calculate the Runoff Coefficient

The General Permit requires that you estimate the runoff coefficient of the site after construction is complete. The runoff coefficient is an estimate of the fraction of total rainfall that will appear as runoff. For example, the "c" value of lawn area is 0.2, which indicates that only 20 percent of the water that falls on grassed areas will end up as surface runoff. In contrast, the "c" value of a paved area can be 0.9 or higher, indicating that 90 percent of the rain falling on this type of surface will run off. Runoff coefficients for sites with more than one land use are estimated by calculating a weighted average (based upon area) of the runoff coefficients for each land use. Table 1 lists runoff coefficients for various land uses.

TABLE 1. TYPICAL "C" VALUES (ASCE 1960)

Description of Area	Runoff Coefficients
Business	
Downtown Areas	0.70-0.95
Neighborhood Areas	0.50-0.70
Residential	
Single-family areas	0.30-0.50
Multiunits, detached	0.40-0.60
Multiunits, attached	0.60-0.75
Residential (suburban)	0.25-0.40
Apartment dwelling areas	0.50-0.70
Industrial	
Light Areas	0.50-0.80
Heavy areas	0.60-0.90
Parks, cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets	
Asphalt	0.70-0.95
Concrete	0.80-0.95
Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95
Lawns - coarse textured soil (greater than 85% sand)	
Slope: Flat, 2%	0.05-0.10
Average, 2-7%	0.10-0.15
Steep, 7%	0.15-0.20
Lawns - fine textured soil (greater than 40% clay)	
Slope: Flat, 2%	0.13-0.17
Average, 2-7%	0.18-0.22
Steep, 7%	0.25-0.35

CONTROL SELECTION/PLAN DESIGN PHASE

After you have collected the information and made measurements, the next phase is to design a plan to prevent and control pollution of storm water runoff from your construction site. To complete the Storm Water Pollution Prevention Plan, (A) review and incorporate State and local requirements, (B) select erosion and sediment controls, (C) select other controls, (D) select storm water management controls, (E) indicate the location of controls in the site map, (F) prepare an inspection and maintenance plan, (G) prepare a description of controls, and (H) prepare a sequence of major activities. The following subsections explain how the controls you select should be described in the Storm Water Pollution Prevention Plan.

(A) Review and Incorporate State and Local Requirements

If the construction site is located in a State or municipality which implements its own separate storm water management or erosion and sediment control programs, then the pollution prevention plan prepared for compliance with EPA's NPDES General Permit must also comply with the State or local requirements. Therefore, prior to designing the pollution prevention plan, you must first determine what requirements, if any, exist for sediment and erosion site plans, site permits or storm water management site plans, or site permits. Where these requirements do exist, then they must be carefully reviewed and incorporated into the plan design.

Consideration of State and local requirements in the plan design phase is necessary because the permit requires that the permittee provide a certification that the pollution prevention plan reflects the requirements applicable to protecting surface water resources in sediment and erosion site plans or permits, or storm water management site plans or site permits approved by State or local officials.

(B) Select Erosion and Sediment Controls

The Storm Water Pollution Prevention Plan must include a description of the measures to be used for erosion and sediment controls throughout the construction project. These controls include stabilization measures for disturbed areas and structural controls to divert runoff and remove sediment. Erosion and sediment controls are implemented during the construction period to prevent and/or control the loss of soil from the construction site into the receiving waters. Your selection of the most appropriate erosion and sediment controls depends on a number of factors, but is most dependent on site conditions. The information collected in the site evaluation, design and assessment phases is used to select controls. Some controls are discussed below:

- **Stabilization**—Under the EPA's General Permit disturbed areas of the construction site that will not be redisturbed for 21 days or more must be stabilized by the 14th day after the last disturbance. Stabilization measures include the following:
 - **Temporary seeding**—Temporary seeding is the planting of fast-growing grasses to hold down the soils in disturbed areas so that they are less apt to be carried offsite by storm water runoff or wind.
 - **Permanent seeding**—Permanent seeding is the use of permanent vegetation (grass, trees, or shrubs) to stabilize the soil by holding soil particles in place.
 - **Mulching**—Mulching is the placement of material such as hay, grass, woodchips, straw, or gravel on the soil surface to cover and hold in place disturbed soils. (Mulching often accompanies seeding.)

The EPA General Permit requires that the pollution prevention plan include structural practices to divert flows away from disturbed areas, to store flows, or to limit the discharge of pollutants from the site. The following is a list of some of the practices which may be used.

- **Structural control measures**

- **Earth Dike**—An earth dike is a mound of stabilized soil which is constructed to divert runoff. Earth dikes may be used to either divert uncontaminated runoff away from disturbed areas or to divert contaminated runoff into a sediment basin or sediment trap.
- **Silt fence**—A silt fence is a temporary measure consisting of posts with filter fabric stretched across the posts and sometimes with a wire support fence. The fence is installed along the downslope or sideslope perimeter of a disturbed area. Runoff passes through the openings in the fabric, while sediment is trapped on the uphill side.
- **Sediment trap**—A sediment trap is formed by excavating a pond or by placing an earthen embankment across a low area or drainage swale. It has an outlet or spillway made of large stones or aggregate. The trap retains the runoff long enough to allow the silt to settle out.
- **Sediment basin**—A sediment basin is a settling pond with a controlled water release structure, e.g., a riser and pipe outlet with a gravel filter, which slows the release of runoff. The basin detains sediment-laden runoff from larger drainage areas long enough for most of the sediment to settle out.

The EPA General Permit requires that, where it is attainable, a temporary or permanent sediment basin be installed in any drainage location where more than 10 acres in the upstream drainage area are disturbed at one time. The sediment basin must provide at least 3,600 cubic feet of storage for every acre of land which it drains (flows from upland areas that are undisturbed may be diverted around the basin). For drainage locations with 10 or fewer disturbed acres, sediment traps, filter fences, or equivalent measures must be installed along the downhill boundary of the construction site.

(C) Select Other Controls

In addition to erosion and sediment controls, the Pollution Prevention Plan for your project must address the other potential pollutant sources that may exist on a construction site. These controls include proper disposal of construction site waste disposal, compliance with applicable State or local waste disposal, sanitary sewer or septic system regulations, control of offsite vehicle tracking, and control of allowable non-storm water discharges, as explained in the following bullets:

- **Ensure proper disposal of construction site waste materials.**
- **Treat or dispose of sanitary wastes that are generated onsite in accordance with State or local requirements. Contact the local government or State regulatory agency.**
- **Prevent offsite tracking of sediments and generation of dust. Stabilized construction entrances or vehicle washing racks should be installed at locations where vehicles leave the site. Where dust may be a problem, implement dust control measures such as irrigation.**
- **Identify and prevent contamination of non-storm water discharges. Where non-storm water discharges allowed by the General Permit exist, they must be identified and steps must be taken to prevent contamination of these discharges.**

(D) Select Storm Water Management Controls

Storm water management controls are constructed to prevent or control pollution of storm water after the construction is completed. The General Permit requires that the pollution prevention plan include a description of the measures that will be installed to control pollutants in storm water after construction is complete. For sites in which the development results in runoff flows that are higher than pre-construction levels, the pollution prevention plan must include a technical explanation of why a particular storm water management measure was selected. These controls include, but are not limited to, one or more of the following:

- **Retention pond**—A pond that holds runoff in a reservoir without release except by means of evaporation, infiltration, or emergency bypass.
- **Detention pond**—A pond that holds or detains runoff in a basin for a limited time releasing it slowly to allow most of the sediments to drop out.
- **Infiltration measures**—Measures that allow the percolation of water through the ground surface into subsurface soil. Specific measures include infiltration trenches, basins, and dry wells.
- **Vegetated swales and natural depressions**—Grass-lined ditches or depressions that transport runoff, filter sediments from the runoff, and enhance infiltration of the runoff.

Selection of the most appropriate storm water management measures depends upon a number of factors associated with site conditions. EPA expects that most sites can employ measures to remove 80 percent of the total suspended solids from post-construction runoff. When you select storm water management measures for a development project, consider the impacts of these measures on other environmental media (e.g., land, air, and ground water).

In addition to pollutant removal, the storm water management portion of the plan must address velocity dissipation at discharge locations. Development usually means an increase in speed with which the site will drain because of the addition of paved areas, storm sewers, curbs, gutters, etc. The General Permit requires that velocity dissipation devices be placed along the length of any outfall where the discharge from the developed area may erode the channel. The potential for erosion is primarily dependent upon the velocity of the storm water discharge and the type of material that lines the channel. One velocity dissipation device is riprap outlet protection, which is stone or riprap placed at the discharge point to reduce the speed of concentrated storm water flows.

(E) Indicate the Location of Controls on the Site Map

Pollution prevention measures must be shown on the pollution prevention site map, including the location of each measure used for erosion and sediment control, storm water management, and other controls. When this has been done, the site map is ready to be included in the Pollution Prevention Plan. Note: It may not be feasible to indicate some controls on the site map, e.g., waste control measures.

(F) Prepare an Inspection and Maintenance Plan

After the Storm Water Pollution Prevention Plan is prepared and the necessary controls are installed, you will be responsible for inspecting and maintaining them. The General Permit requires that you prepare a description of the procedures to maintain the pollution prevention measures onsite. An inspection and maintenance checklist for each of the control measures proposed for the construction site should be included in the Storm Water Pollution Prevention Plan prior to starting construction.

(G) Prepare a Description of Controls

Once you have finished planning your construction activities and selected the controls, make a list of each type of control you plan to use on the site. Include a description of each control, describe its purpose, and explain why it is appropriate in this location. The description should also include specific information about the control such as size, required materials, and methods of installation/use. Read your permit carefully to ensure that your plan includes all of the required controls.

(H) Prepare a Sequence of Major Activities

You must prepare a sequence of major activities that includes the installation of all the controls, earth disturbing activities, all stabilization activities, and the maintenance required for the controls. The sequence should clearly indicate the order in which each of the activities described takes place. Several general principles are helpful in developing the sequence of major activities:

- Install downslope and sideslope perimeter controls before the land disturbing activity occurs.
- Do not disturb an area until it is necessary for construction to proceed.
- Cover or stabilize disturbed areas as soon as possible.
- Time construction activities to limit impact from seasonal climate changes or weather events.
- Delay construction of infiltration measures until the end of the construction project when upstream drainage areas have been stabilized.
- Do not remove temporary perimeter controls until after all upstream areas are finally stabilized.

CERTIFICATION AND NOTIFICATION PHASE

Once the site description and controls portion of the Storm Water Pollution Prevention Plan have been prepared, you now must (A) certify the pollution prevention plan and (B) submit a Notice of Intent to the appropriate agency. The checklist provided at the end of this document will be very useful in evaluating whether all the required items are included in your Storm Water Pollution Prevention Plan prior to certifying the plan or submitting a Notice of Intent.

(A) Certify the Pollution Prevention Plan

Once a pollution prevention plan is prepared, the EPA General Permit requires that the plan be certified. The plan should identify an **Authorized representative** for each operator to sign the plan. The authorized representative must be someone at or near the top of the management chain, such as the president, vice president, or a general partner, who has been delegated the authority to sign and certify this type of document. In signing the plan, the authorized representative certifies that the information is true and assumes liability for the plan. Note that Section 309 of the Clean Water Act provides for significant penalties where information is false or the permittee violates, either knowingly or negligently, permit requirements.

In addition to the party or parties considered to be operators, construction activities often have a number of different short-term contractors and subcontractors coming onsite during each phase of the project development. The EPA General Permit requires that the contractors and subcontractors responsible for implementing measures in the Pollution Prevention Plan be listed in the plan with the measures for which they are responsible and that they sign a certification statement that they understand the permit requirements.

(B) Submit a Notice of Intent

The General Permit for Storm Water Discharges Associated with Industrial Activity from Construction Activities requires that you submit a Notice of Intent (NOI) at least 2 days before construction activities begin. The NOI is essentially an application and contains important information about your site, including site location, owner information, operator (general contractor) information, receiving water(s), existing NPDES Permit Number (if any), an indication of existing quantitative data, and a brief description of the project.

EPA has developed a one-page form to be used by industrial facilities and construction activities when they submit NOIs. This form indicates all the information that you are required to provide and must be used in order for the NOI to be processed correctly. NOIs for the EPA General Permit will be submitted directly to EPA's central processing center at the following address:

**Storm Water Notice of Intent
P.O. Box 1215
Newington, VA 22122**

Each party or each of the parties who have day-to-day responsibilities for site operations, and each party or each of the parties who have control over the designs and specifications necessary to ensure compliance with plan requirements and permit conditions, must submit an NOI. It is anticipated that there will be projects where more than one entity (e.g., the owner, developer, or general contractor) will need to submit

an NOI so that both of the requirements for an operator are met. In this case, those persons will become co-permittees.

Deadlines—There are different deadlines for submitting NOIs depending on whether the construction starts before or after October 1, 1992.

- **Before October 1, 1992**—For construction activities that have started before October 1, 1992, and plan to continue beyond this date, the NOI must be submitted on or before October 1, 1992.
- **After October 1, 1992**—If construction will not begin until after October 1, 1992, an NOI must be postmarked at least 2 days before construction begins.
- The Storm Water Pollution Prevention Plan must be completed prior to the submittal of an NOI.

CONSTRUCTION/ IMPLEMENTATION PHASE

Once you have prepared a Storm Water Pollution Prevention Plan and filed a Notice of Intent, you may start construction of the project as early as 2 days after the NOI is postmarked. However, you have not yet met all requirements of your permit. You must now do the things that you said you would do in the Storm Water Pollution Prevention Plan: (A) implement the controls, (B) inspect and maintain the controls, (C) maintain records of construction activities, (D) update/change the plan to keep it current, (E) take proper action when there is a reportable quantity spill, and (F) have plans accessible.

(A) Implement Controls

The first action that should be taken is to construct or perform the controls that were selected for the Storm Water Pollution Prevention Plan. The controls should be constructed or applied in accordance with State or local specifications. If there are no State or local specifications for control measures, then the controls should be constructed in accordance with good engineering practices. The controls must be constructed in the order indicated in the sequence of major activities. Stabilization measures must be applied within the timeframe specified in the permit.

To ensure that controls are adequately implemented, it is important that the work crews who install the measures are experienced and/or adequately trained. Improperly installed controls can have little or no effect and may actually increase the pollution of storm water. It is also important that all other workers on the construction site be made aware of the controls so that they do not inadvertently disturb or remove them.

(B) Inspect and Maintain Controls

As discussed previously, inspection and maintenance of the protective measures that are part of this plan are as important to pollution prevention as proper planning, design/selection, and installation.

- **Inspection**—The EPA General Permit requires inspection every 7 days or within 24 hours of a storm of 0.5 inches or more in depth. All disturbed areas of the site, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that were identified as part of the plan must be inspected. Controls must be in good operating condition until the area they protect has been completely stabilized and the construction activity is complete.
- **Maintenance/repairs**—The inspector must record any damages or deficiencies in the control measures on an inspection report form provided for this purpose. These reports document the inspection of the pollution prevention measures. These same forms can be used to request maintenance and repair and to prove that inspection and maintenance were performed. The operator should correct damage or deficiencies as soon as practicable after the inspection but in no case later than 7 days after the inspection. Any changes that may be required to correct deficiencies in the Storm Water Pollution Prevention Plan should also be made as soon as practicable after the inspection but in no case later than 7 days after the inspection.

(C) Maintain Records of Construction Activities

In addition to the inspection and maintenance reports, the operator should keep records of the construction activity on the site. In particular, the operator should keep a record of the following information:

- The dates when major grading activities occur in a particular area.
- The dates when construction activities cease in an area, temporarily or permanently.
- The dates when an area is stabilized, temporarily or permanently.

These records can be used to make sure that areas where there is no construction activity will be stabilized within the required timeframe.

(D) Update/Change the Plan

For a construction activity to be in full compliance with its NPDES storm water permit, and for the Storm Water Pollution Prevention Plan to be effective, the plan must accurately reflect site features and operations. When it does not, the plan must be changed. The plan must also be changed if the operator observes that it is not effective in minimizing pollutant discharge from the site.

If, at any time during the effective period of the permit, the permitting authority finds that the plan does not meet one or more of the minimum standards established by the General Permit, the permitting authority will notify the permittee of required changes necessary to bring the plan up to standard.

(E) Report Releases of Reportable Quantities

Because construction activities may handle certain hazardous substances over the course of the project, spills of these substances in amounts that equal or exceed Reportable Quantity (RQ) levels are a possibility. EPA has issued regulations that define what reportable quantity levels are for oil and hazardous substances. These regulations are found at 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302. If there is a RQ release during the construction period, then you must take the following steps:

- Notify the National Response Center immediately at (800) 424-8802; in Washington, D.C., call (202) 426-2675.
- Within 14 days, submit a written description of the release to the EPA Regional office providing the date and circumstances of the release and the steps to be taken to prevent another release.
- Modify the pollution prevention plan to include the information listed above.

(F) Provide for Plan Location and Access

The General Permit has specific requirements regarding plan location and access.

- **Plan location**—A copy of the Pollution Prevention Plan must be kept at the construction site from the time construction begins until the site is finally stabilized.
- **Retention of records**—Retention of records requires that copies of the Storm Water Pollution Prevention Plan and all other reports required by the permit, as well as all of the data used to complete the NOI be retained for 3 years after the completion of final site stabilization.

- **Access**—Although plans and associated records are not necessarily required to be submitted to the Director, these documents must be made available upon request to the Director, or any State or local agency who is approving erosion and sediment control plans, or storm water management plans. If site storm water runoff is discharged to a municipal separate storm sewer system, the plans must be made available upon request to the municipal operator of the system.

FINAL STABILIZATION/ TERMINATION PHASE

Operators of a construction site must continue to comply with permit conditions until: (1) they no longer meet the definition of an operator of a construction site; or (2) the construction activity is complete, all disturbed soils have been finally stabilized, and temporary erosion and sediment controls have been or will be removed. A permittee should submit a Notice of Termination (NOT) to inform EPA that he/she is no longer an operator of a construction activity.

Final stabilization—Final stabilization is defined by the EPA General Permit as meaning that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70 percent of the cover for unpaved areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

Notice of Termination—The NOT is a one-page form which should be completed and submitted to EPA when a site has been finally stabilized or when an operator of a construction activity changes. Information to be included on the NOT includes the location of the construction site; the name, address, and telephone number of the operator terminating coverage; the NPDES general permit number; an indication of why coverage under the permit should be terminated for the operator; and a signed certification statement.

Note that when there is a change in operators of a construction activity, then the new operator must submit an NOI to be covered by the permit at least 2 days before the change in operator.

NOT's should be mailed to the following address:

Storm Water Notice of Termination
P.O. Box 1185
Newington, Virginia 22122

Record Retention—Following the termination of construction activities the permittees must keep a copy of the Storm Water Pollution Prevention Plan and records of all the data used to complete the Notice of Intent for a period of at least three years following final stabilization. The record retention period may be extended by EPA's request.

OTHER REFERENCES

In addition to this summary, other documents are available to assist in the preparation and implementation of pollution prevention plans. These documents include a copy of Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices (EPA 832-R-92-005, September 1992), which is available from the National Technical Information Service (NTIS Order No. PB 922 359 51 at (703) 487-4650).

Other information and guidance available from EPA's National Storm Water Hotline [EPA's National Storm Water Hotline number - (703) 821-4823] includes:

- ▲ Draft - Sediment and Erosion Control; an Inventory of Current Practices (EPA, OWEC, April 20, 1990)
- ▲ Draft - Construction Site Storm Water Discharge Control; an Inventory of Current Practices (Kamber Engineering, June 26, 1991)

You may also obtain copies of the EPA General Permits which apply to your construction site:

- ▲ September 9, 1992, Federal Register (57 FR 41176) - Final NPDES General Permits for Storm Water Discharges from Construction Sites; Notice

- Applicability:

For the States of Alaska, Arizona, Idaho, Louisiana, Maine, New Hampshire, New Mexico, Oklahoma, South Dakota and Texas; for the Commonwealth of Puerto Rico; for Indian lands located in Alaska, California, Colorado (including the Ute Mountain Reservation in Colorado), Florida (two tribes), Idaho, Louisiana, Maine, Massachusetts, Mississippi, Montana, New Hampshire, New Mexico, Nevada, North Carolina, North Dakota, Oklahoma, Texas, Utah, Washington and Wyoming; for Federal facilities in Colorado and Washington; and for the territories of Johnston Atoll, and Midway and Wake Island.

- ▲ September 25, 1992, Federal Register (57 FR 44412) - Final NPDES General Permits for Storm Water Discharges from Construction Sites; Notice

- Applicability:

For the States of Florida and Massachusetts; for American Samoa and Guam; for the District of Columbia; for Indian lands located in New York; and for Federal facilities in Delaware.

Also, please contact your State or local Storm Water Management or Sediment and Erosion Control permit or plan reviewers for local requirements and additional information.

**EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS
PRECONSTRUCTION CHECKLIST**

Storm Water Pollution Prevention Plans

1. A site description, including:
 - ☐ The nature of the activity
 - ☐ Intended sequence of major construction activities
 - ☐ The total area of the site
 - ☐ The area of the site that is expected to undergo excavation
 - ☐ The runoff coefficient of the site after construction is complete
 - ☐ Existing soil or storm water data
 - ☐ A site map with:
 - ☐ Drainage patterns
 - ☐ Approximate slopes after major grading
 - ☐ Area of soil disturbance
 - ☐ Outline of areas which will not be disturbed
 - ☐ Location of major structural and non-structural controls
 - ☐ Areas where stabilization practices are expected to occur
 - ☐ Surface waters
 - ☐ Storm water discharge locations
 - ☐ The name of the receiving water(s)
2. A description of controls:
 - 2.1 Erosion and sediment controls, including:
 - ☐ Stabilization practices for all areas disturbed by construction
 - ☐ Structural practices for all drainage/discharge locations
 - 2.2 Storm water management controls, including:
 - ☐ Measures used to control pollutants occurring in storm water discharges after construction activities are complete
 - ☐ Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel
 - 2.3 Other controls including:
 - ☐ Waste disposal practices which prevent discharge of solid materials to waters of the U.S.
 - ☐ Measures to minimize offsite tracking of sediments by construction vehicles
 - ☐ Measures to ensure compliance with State or local waste disposal, sanitary sewer, or septic system regulations
 - 2.4 ☐ Description of the timing during the construction when measures will be implemented
3. ☐ State or local requirements incorporated into the plans
4. ☐ Inspection and maintenance procedures for control measures identified in the plan
5. ☐ Identification of allowable non-storm water discharges and pollution prevention measures
6. ☐ Contractor certification
7. ☐ Plan certification

EPA CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan Construction/Implementation Checklist

1. **Maintain Records of Construction Activities, including:**
 - ☐ Dates when major grading activities occur
 - ☐ Dates when construction activities temporarily cease on a portion of the site
 - ☐ Dates when construction activities permanently cease on a portion of the site
 - ☐ Dates when stabilization measures are initiated on the site
2. **Prepare Inspection Reports summarizing:**
 - ☐ Name of inspector
 - ☐ Qualifications of inspector
 - ☐ Measures/areas inspected
 - ☐ Observed conditions
 - ☐ Changes necessary to the SWPPP
3. **Report Releases of Reportable Quantities of Oil or Hazardous Materials (if they occur):**
 - ☐ Notify National Response Center 800/424-8802 immediately
 - ☐ Notify permitting authority in writing within 14 days
 - ☐ Modify the pollution prevention plan to include:
 - the date of release
 - circumstances leading to the release
 - steps taken to prevent reoccurrence of the release
4. **Modify Pollution Prevention Plan as necessary to:**
 - ☐ Comply with minimum permit requirements when notified by EPA that the plan does not comply
 - ☐ Address a change in design, construction operation or maintenance which has an effect on the potential for discharge of pollutants
 - ☐ Prevent reoccurrence of reportable quantity releases of a hazardous material or oil

EPA CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan Final Stabilization/Termination Checklist

1. ☐ All soil disturbing activities are complete
2. ☐ Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time
3. ☐ All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed

**POLLUTION PREVENTION PLAN FOR STORM WATER DISCHARGE ASSOCIATED WITH
CONSTRUCTION ACTIVITIES
EROSION AND SEDIMENT CONTROL SELECTION CHECKLIST**

INSTRUCTIONS: THIS CHECKLIST LISTS THE MINIMUM SEDIMENT EROSION CONTROL REQUIREMENTS UNDER THE USEPA GENERAL PERMIT. CHECK [✓] EACH ITEM AND FILL IN THE BLANKS BELOW TO EVALUATE COMPLIANCE FOR EACH DRAINAGE AREA AND LOCATION. NOTE: THIS CHECKLIST WAS PREPARED FOR THE USEPA GENERAL PERMIT. REQUIREMENTS FOR STATE GENERAL PERMITS MAY VARY.

Stabilization Practices

- ☐ Stabilization will be initiated on all disturbed areas where construction activity will not occur for a period of more than 21 calendar days by the 14th day after construction activity has permanently or temporarily ceased.

Stabilization measures to be used include:

- | | |
|--|--|
| <input type="checkbox"/> Temporary Seeding | <input type="checkbox"/> Sod Stabilization |
| <input type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Geotextiles |
| <input type="checkbox"/> Mulching | <input type="checkbox"/> Other _____ |

Structural Practices

- ☐ Flows from upstream areas will be diverted from exposed soils to the degree attainable. Measures to be used include:

- | | |
|---|---|
| <input type="checkbox"/> Earth Dike | <input type="checkbox"/> Pipe Slope Drain |
| <input type="checkbox"/> Drainage Swale | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Interceptor Dike and Swale | |

**Drainage locations serving less than 10
disturbed acres**

- ☐ Sediment controls will be installed
- Sediment controls include:
- ☐ Sediment Basin
 - ☐ Sediment Trap
 - ☐ Silt Fence or equivalent controls along all sideslope and downslope boundaries

**Drainage locations serving 10 or more
disturbed acres**

- ☐ A Sediment Basin will be installed
- ☐ A Sediment Basin is not attainable on the site; therefore, the following sediment controls will be installed:
- ☐ Sediment Trap
 - ☐ Silt Fence or equivalent controls along the sideslope and downslope boundaries

Sediment Basin Runoff Storage Calculation

_____	acres area draining to the sediment basin
X	
3,600	cubic feet of storage/acre
=	
_____	cubic feet of storage required for the basin.

HOMERVILLE APARTMENTS CONSTRUCTION POLLUTION PREVENTION PLAN

SITE DESCRIPTION					
Project Name and Location: (Latitude, Longitude, or Address)	Homerville Apartments 21 Broadview Avenue Center City, ANY State 00000	Owner Name and Address:	Quality Associates 11 Main Street Center City, ANY State 00000		
Description: (Purpose and Types of Soil Disturbing Activities)	<p>This project will consist of three low-rise, attached apartment buildings with adjacent parking facilities.</p> <p>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.</p>				
Runoff Coefficient:	The final coefficient of runoff for the site will be $c = 0.5$.				
Site Area:	The site is approximately 11.0 acres of which 9.8 acres will be disturbed by construction activities.				
Sequence of Major Activities					
The order of activities will be as follows:					
<ol style="list-style-type: none"> 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 sewer, curb and gutter 		<ol style="list-style-type: none"> 9. Apply stone to parking area and road 10. Construct apartment buildings 11. Complete grading and install permanent seeding 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					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px; vertical-align: top;">Erosion and Sediment Controls</td> <td style="width: 50%; padding: 5px; vertical-align: top;">Stabilization Practices</td> </tr> </table>				Erosion and Sediment Controls	Stabilization Practices
Erosion and Sediment Controls	Stabilization Practices				
<p>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 Rye (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 which are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until bituminous pavement can be applied.</p>					
<p>Permanent Stabilization - Disturbed portions of the site where construction activities permanently ceases shall be stabilized with permanent seed no later than 14 days after the last construction activity. The permanent seed mix shall consist of 80 lbs/acre tall fescue, and 40 lbs/acre kobe lespedeza. 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.</p>					

CONTROLS (Continued)

Structural Practices

Earth Dike - will be constructed along the uphill perimeter (north) of the site. A portion of the dike will divert runoff 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 36,000 cubic feet (0.82) acre feet. The basin will drain through a corrugated metal riser and outlet pipe to a rip rap outlet apron. Once construction activities are nearly complete, the accumulated sediment will be removed from the basin.

Storm Water Management

Storm water drainage will be provided by curb and gutter, storm sewer and catch basin, for the developed areas. The areas which are not developed will be graded at less than 0.5:1 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 0.82 (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 percent removal of total suspended solids from the site's storm water runoff. The pond has been designed by a professional engineer to keep peak flow rates 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.

TIMING OF CONTROLS/MEASURES

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, AND 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 ordinance 5-188. 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.
- 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 sediment basin will be inspected for depth of sediment, and built up sediment will be removed when it reaches 10 percent of the design capacity or at the end of the job.
- Diversion dike will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy 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.

MAINTENANCE/INSPECTION PROCEDURES (Continued)

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 flushings.
- 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.

INVENTORY FOR POLLUTION PREVENTION PLAN

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

- Concrete
- Detergents
- Paints (enamel and latex)
- Metal Studs
- Concrete
- Tar
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Masonry Block
- Roofing Shingles.

SPILL PREVENTION

Material 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:

The following good housekeeping practices will be followed onsite during the construction project.

- 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 containers 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
- 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 onsite.

Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data will be retained; they contain important product information
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

SPILL PREVENTION (Continued)

Product Specific Practices

The following product specific practices will be followed onsite:

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 which 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, dust pans, 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 reoccurring 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.

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: _____

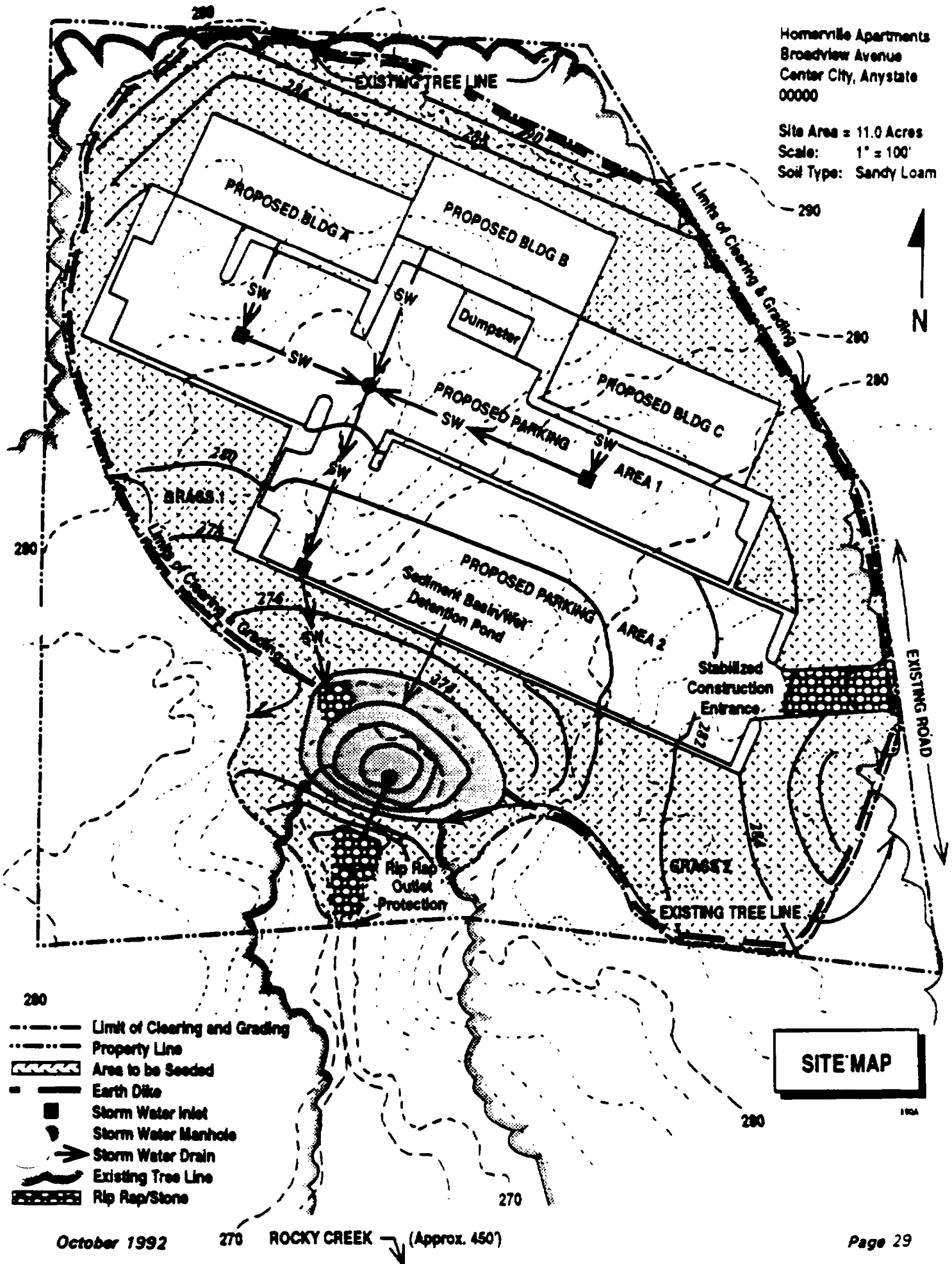
CONTRACTOR'S CERTIFICATION

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.

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

Homerville Apartments
Broadview Avenue
Center City, Anystate
00000

Site Area = 11.0 Acres
Scale: 1" = 100'
Soil Type: Sandy Loam



- 280
- Limit of Clearing and Grading
- Property Line
- Area to be Seeded
- Earth Dike
- Storm Water Inlet
- Storm Water Manhole
- Storm Water Drain
- Existing Tree Line
- Rip Rap/Stone

SITE MAP

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:

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL _____ INCHES

STABILIZATION MEASURES

AREA	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED? (YES/NO)	STABILIZED WITH	CONDITION
BLDG. A					
BLDG. B					
BLDG. C					
PRKNG. 1					
PRKNG. 2					
GRASS 1					
GRASS 2					

STABILIZATION REQUIRED:

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

HOMERVILLE APARTMENTS
STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM
STRUCTURAL CONTROLS

DATE: _____

EARTH DIKE:

FROM	TO	IS DIKE STABILIZED?	IS THERE EVIDENCE OF WASHOUT OR OVER-TOPPING?
BUILDING B	STABILIZED CONSTRUCTION ENTRANCE		
STABILIZED CONSTRUCTION ENTRANCE	SEDIMENT BASIN		
BUILDING B	SEDIMENT BASIN		

MAINTENANCE REQUIRED FOR EARTH DIKE:

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

HOMERVILLE APARTMENTS

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN:

DEPTH OF SEDIMENT IN BASIN	CONDITION OF BASIN SIDE SLOPES	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE:

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE?	IS THE CULVERT BENEATH THE ENTRANCE WORKING?

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

HOMERVILLE APARTMENTS
STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

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: _____



United States
Environmental Protection Agency
Washington DC 20460
(EN 336)

Official Business
Penalty For Private Use \$300